

## ABSTRACT

Title of Thesis: ST. ANN'S UNITY HOUSE;  
ARCHITECTURE AS A MEANS OF  
SUPPORTING FAMILY STRUCTURE

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Master of Science  
2019

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This thesis is a transitional housing program for young mothers or expectant mothers who are ready to take the next step in their independence. This facility is an extension of an existing Catholic charity called St. Ann's Center for Children Youth and Families. Women who find themselves in threatening situations with their child can stay at St. Ann's while they gain their strength. This thesis acts as a stepping stone between St. Ann's structured and protective environment to complete self-sufficiency. The main focus for this thesis is providing a safe environment that fosters growth, health, independence and a supportive community for these women and their children.

ST. ANN'S UNITY HOUSE; ARCHITECTURE AS A MEANS OF  
SUPPORTING FAMILY STRUCTURE

by

Joanna Hess

Thesis submitted to the Faculty of the Graduate School of the  
University of Maryland, College Park, in partial fulfillment  
of the requirements for the degree of  
Master of Architecture  
2019

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# Table of Contents

Table of Contents .....	ii
List of Figures .....	iv
Chapter 1: Inspiration - St. Ann's Center for Children, Youth and Families .....	1
Purpose.....	1
Mission.....	1
Strength and Guidance .....	1
Spirituality.....	3
Diversity.....	4
History.....	4
Program.....	6
Chapter 2: Determining Site Location .....	9
St. Ann's Current Site .....	9
Proposed Site .....	11
Financial Analysis for Site Locations.....	12
Chapter 3: Empowering Women Through Design .....	15
Introduction.....	15
Self-Sufficiency .....	15
Definition .....	15
Programs and Examples.....	16
Design Theory to Promote Self-Sufficiency.....	18
Traditional Spaces for Women .....	19
Domestic Spaces .....	19
Convents .....	20
Courtyard Buildings.....	21
Calming and Productive Spaces.....	23
Natural Light.....	23
Dignified Space.....	24
Common spaces .....	24
Chapter 4: Providing Space for Imaginative Development in Children .....	26
Children in the St. Ann's Program.....	26
Natural Playscape in Urban Environment.....	26
Purpose.....	26
Positive Play Behaviors .....	27
Design Elements .....	28
Implementing Rudolf Steiner's Theories.....	30
Spirituality.....	30
Art and Architecture .....	30
Chapter 5: Precedent Analysis .....	32
Purpose.....	32
Sainte Marie de la Tourette.....	32



Project .....	32
Program .....	36
Relationship to St. Ann's Unity House .....	39
BIGyard .....	39
Project .....	39
Relationship to St. Ann's Unity House .....	42
Chapter 6: Building Program .....	45
St. Ann's Center Programmatic Needs .....	45
Building Program Analysis .....	46
Dwelling Units .....	46
Amenities .....	47
Mixed-use .....	47
Programming Outdoor Space .....	49
Chapter 7: Site Analysis .....	52
Location .....	52
Nearby Amenities .....	54
Zoning .....	56
Diagramming the Site .....	59
Obstacles .....	59
Program .....	59
Site Schemes .....	61
Chapter 8: Design Intent .....	66
Building Massing .....	66
Design Concepts .....	68
Shared Space .....	69
Sunlight .....	70
Materials .....	71
Building Layout .....	73
Bibliography .....	82

## List of Figures

Figure: 1, St. Ann’s Mission (Source: Gelman, Rosenberg & Freedman Certified Public Accountants) .....	4
Figure 2, St. Ann’s Locations in Washington, D.C. (Source: Author) .....	5
Figure 3, Lack of Affordable Childcare. (Source: Author) .....	8
Figure 4, St. Ann’s Current Site in Hyattsville, MD (Source: Google Earth) .....	10
Figure 5, View of St. Ann’s Main Building. (Source: Author) .....	11
Figure 6, Proposed Site Location. (Source: Author) .....	12
Figure 8, Breakdown of Revenue and Expenses for St. Ann’s Center. (Source: Gelman, Rosenberg & Freedman Certified Public Accountants) .....	14
Figure 9, Demonstrating how family homelessness effects women more than men. (Source: Rohe) .....	16
Figure 10, Showing the programs that participants felt most helpful. (Source: Rohe) .....	17
Figure 11, Graphic representation of families heading toward self-sufficiency (Source: Author) .....	19
Figure 12, Convent of St. Francis in Sorrento Italy demonstrating the courtyard, boundaries and white-washed walls. (Source: Nikolay Korzhov) .....	21
Figure 13, Diagram of courtyard using sunlight and natural ventilation. (Source: Author) .....	23
Figure 14, St. Ann’s Current Playground: fixed plastic equipment on asphalt. (Source: Author) .....	28

Figure 15, Kids playing in an uncontained sand pit. (Source: Kuh, Ponte, Chau.) ...	29
Figure 16, La Tourette located in the country side South of the city. (Source: Author)	
.....	33
Figure 17, La Tourette's sloping terrain. (Source: Utzonphotos) .....	34
Figure 18, Variety of concrete forms. (Source: ArchDaily) .....	35
Figure 19, Light shafts in chapel over tiered altars. (Source: Texas Tech University)	
.....	35
Figure 20, View of La Tourette's West façade. (Source: LSU CoAD) .....	36
Figure 21, Floor plan showing the long, narrow sleeping rooms. (Source: ArchDaily)	
.....	37
Figure 22, Program inventory of La Tourette. (Source: Author) .....	38
Figure 23, BIGyard site in Berlin, Germany. (Source: Author) .....	40
Figure 24, Section of buildings and courtyard showing height difference. (Source:	
ArchDaily) .....	41
Figure 25, Private roof terraces and roof gardens. (Source: ArchDaily) .....	42
Figure 26, BIGyard Courtyard. (Source: ArchDaily) .....	43
Figure 27, Light entering upstairs bedroom facing courtyard. (Source: ArchDaily) ..	44
Figure 28, St. Ann's Center Programs. (Source: Author) .....	45
Figure 29, Program engineering spreadsheet. (Source: Author) .....	48
Figure 30, Graphic representation of program. (Source: Author) .....	49
Figure 31, St. Ann's site boundary showing open space. (Source: Author) .....	50
Figure 32, Diagram of outdoor space adjacencies. (Source: Author) .....	51
Figure 33, Location of site in Washington, D.C. (Source: Author) .....	53

Figure 34, Site Location. (Source: Author) .....	54
Figure 35, Diagram of nearby amenities, neighborhoods and public transportation. (Source: Author) .....	55
Figure 36, Site Plan. (Source: Author) .....	56
Figure 37, Surrounding Landuses. (Source: Author) .....	57
Figure 38, Surrounding Context. (Source: Author) .....	58
Figure 39, Development across the street from site called Eckington Yards (Source: JBG Smith) .....	58
Figure 40, Diagram of program square footage on site. (Source: Author) .....	60
Figure 41, Site section with programmatic stacking. (Source: Author) .....	60
Figure 42, Scheme 1. (Source: Author) .....	61
Figure 43, Scheme 1 3D. (Source: Author) .....	62
Figure 44, Scheme 2. (Source: Author) .....	63
Figure 45, Scheme 2 3D. (Source: Author) .....	63
Figure 46, Scheme 3. (Source: Author) .....	64
Figure 47, Scheme 3 3D. (Source: Author) .....	65
Figure 48, Site Analysis Diagram. (Source: Author) .....	65
Figure 49, Massing Move 1. (Source: Author) .....	66
Figure 50, Massing Move 2. (Source: Author) .....	67
Figure 51, Massing Move 3. (Source: Author) .....	67
Figure 52, Massing Move 4. (Source: Author) .....	68
Figure 53, Massing Move 5. (Source: Author) .....	68
Figure 54, Shared Spaces. (Source: Author) .....	69

Figure 55, Shadow Analysis. (Source: Author) .....	70
Figure 56, Sun Altitudes. (Source Author) .....	71
Figure 57. Materials. (Source: Author) .....	72
Figure 58, Wall Section and Façade Bay. (Source: Author) .....	73
Figure 59, First Floor Plan. (Source: Author) .....	73
Figure 60, Mezzanine Floor Plan. (Source: Author) .....	74
Figure 61, Daycare View. (Source: Author) .....	75
Figure 62, Lobby View. (Source: Author) .....	75
Figure 63, Second Floor Plan. (Source: Author) .....	76
Figure 64, East Courtyard View. (Source: Author) .....	77
Figure 65, Chapel View. (Source: Author) .....	77
Figure 66, Library View. (Source: Author) .....	78
Figure 67. Third Floor Plan. (Source: Author) .....	78
Figure 68, Fourth Floor Plan. (Source: Author) .....	79
Figure 69, Fifth Floor Plan. (Source: Author) .....	79
Figure 70, Street View. (Source: Author) .....	80
Figure 71, Metropolitan Branch Trail View. (Source: Author) .....	81

# Chapter 1: Inspiration - St. Ann's Center for Children, Youth and Families

## Purpose

St. Ann's Center is a unique facility that helps women and children in need. It cannot be defined in one word or one category because it encompasses a variety of disciplines that are constantly shifting in order to endure the ever-changing needs of the public. It has characteristics similar to a homeless shelter, domestic abuse shelter, counseling center, and educational facility. It is a place that offers help and answers for women and children to move forward in their life

## Mission

### Strength and Guidance

St. Ann's Center supports families as they progress towards stability. It is a safe place for women to turn to with their children when they find themselves in threatening situations. St. Ann's offers a community where these women and children can heal, gain strength, and advance in their future. <sup>1</sup>

This facility focuses their resources on unborn children, handicapped children, children at risk of being abused or neglected, expectant mothers, teenage parents and

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<sup>1</sup> "Mission and Values." St. Ann's Center for Children, Youth and Families. September 06, 2016. Accessed March 24, 2019. <https://www.stanns.org/about/mission>.

their infants, and a young child who needs care. Each of these individuals requires different support methods and accommodations. This personalized care creates a variety of disciplines, each needing their own space.

The safety of these women and children is a priority. If they feel safe, they are able to grow, gain confidence, and feel empowered. St. Ann's provides a well-maintained environment with trained staff in order to encourage trust between the residents and the employees. The environment enables the women and children to begin making their own decisions with guidance from St. Ann's to ensure they are leading towards a successful future.

Providing health resources for their residents is another major priority for St. Ann's. When women and children first arrive, many times they lack proper nutrition and care. "St. Ann's Center is a trauma informed agency with a focus on wellness of body, mind and spirit through proper healthcare, education and therapy."<sup>2</sup> St. Ann's gives them the treatment so the residents can be of sound mind before beginning the other processes.

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<sup>2</sup> "Mission and Values."



Figure: 1, St. Ann's Mission (Source: Gelman, Rosenberg & Freedman Certified Public Accountants)

#### Spirituality

St. Ann's was founded by a Catholic organization and therefore bases its mission on "Christian love which offers healing and support to those in need".<sup>3</sup> It carries out the teachings of the Judaeo-Christian principles and strives to exemplify the service by St. Vincent de Paul and St. Louise de Marillac. St. Ann's values human life and makes it possible for women to care for their children.

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<sup>3</sup> "Mission and Values."



## Diversity

Although St. Ann's is founded on Christian principles and values, it opens its doors to all religions, races, sexual orientations and immigration status. St. Ann's recognizes that each individual has different perspectives and opinions that have been formed from past experiences. This diversity helps foster an inclusive and lively community. St. Ann's helps the residents to celebrate their individuality by helping them make their own decisions and encouraging their unique talents and interests.<sup>4</sup>

## History

St. Ann's Center for Children, Youth and Families opened its doors in 1860. The center was started by three members of the Daughters of Charity. The Daughters of Charity is a community of women who dedicate their lives to helping the poorest and most vulnerable individuals in society. This community was started in 1633 by St. Vincent de Paul and St. Louise de Marillac in Paris, France. They now have 14,000 members in over 90 countries.<sup>5</sup> St. Ann's was originally created as Washington D.C.'s first orphanage.

The original building was the old British Embassy in Foggy Bottom on K street which is no longer there. St. Ann's then moved to a building in Kalorama on California street off of Connecticut Avenue. This building currently houses the Church of Our Lady Queen of the Americans and the residence for the Cardinal.<sup>6</sup>

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<sup>4</sup> "Mission and Values"

<sup>5</sup> "The Daughters of Charity." Daughters of Charity Province of St. Louise. February 21, 2019. Accessed March 27, 2019. <https://daughtersofcharity.org/about-us/the-daughters-of-charity/#>.

<sup>6</sup> Bader, Mary Sr. Personal Communication, March 25, 2019.

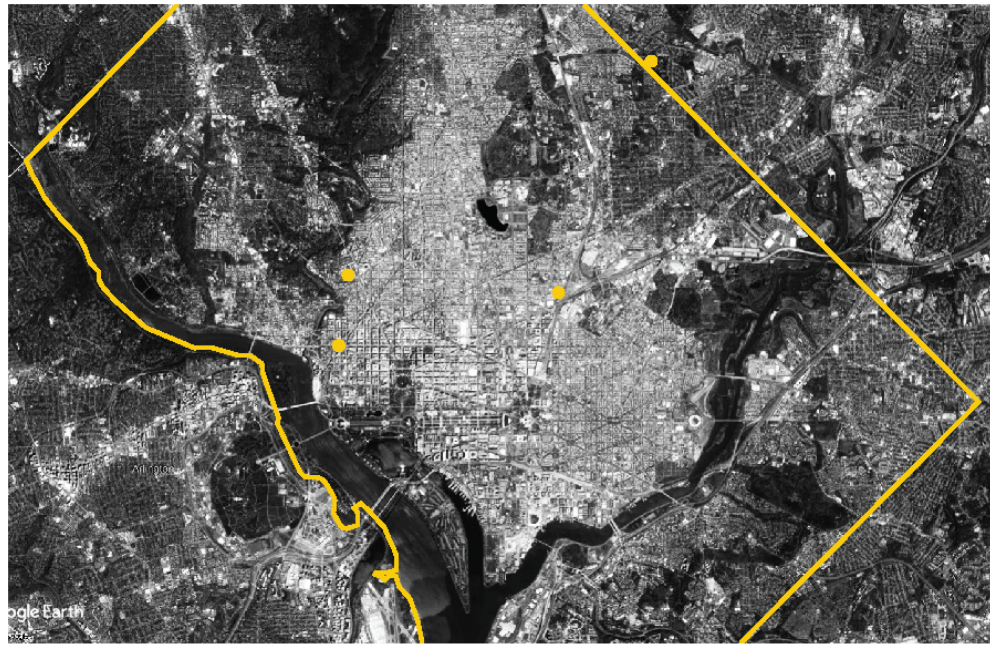


Figure 2, St. Ann's Locations in Washington, D.C. (Source: Author)

St. Ann's Infant Asylum (the original title) soon incorporated an education and job training program for women to become breadwinners. This was because the Civil War had left many women widowed and children orphaned. In 1863, President Abraham Lincoln signed an Act of Congress to incorporate St. Ann's.<sup>7</sup> "St. Ann's Infant Asylum was charged with caring for the city's growing number of abandoned children and unwed mothers of all races and religions, many of whom had no place else to turn."<sup>8</sup> In order to meet the needs of the D.C. area, St. Ann's needed to expand. In 1963, they moved to a larger facility in Hyattsville, MD where they remain today. The historical significance of St. Ann's Center demonstrates its important position in Washington D.C. and how it has helped the community greatly.

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<sup>7</sup> "History." St. Ann's Center for Children, Youth and Families. January 14, 2016. Accessed March 24, 2019. <https://www.stanns.org/about/history>.

<sup>8</sup> "History."

### Program

St. Ann's offers many different programs for the variety of needs they strive to meet. Some of these programs include child care, educational services, transitional housing, life skills and career counselling. The women are also assigned a social worker when they register with St. Ann's in order to ensure access to all of the benefits.<sup>9</sup> This variety of program allows for the women and children to stay at a single facility while they receive support.

The curriculum has shifted over time in order to keep up with society's ever-changing needs. This includes the adoption center. St. Ann's closed their adoption center in 2013 after having it vacant for years. Orphaned children are no longer prevalent in Washington D.C. like they were during the civil war. St. Ann's is on the forefront of preventing the separation of mother and child. While children are typically orphaned because of poverty, abuse or homelessness, St. Ann's offers a place for women and children to settle temporarily so this separation does not have to happen<sup>10</sup>.

Grace House is a home for teen mothers and their babies. Adolescent mothers are at a higher risk of complications during pregnancy and delivery. This program gives them the health they need while teaching the mothers about parenting. Nurses are on site, but St. Ann's also takes them to their routine appointments at Providence

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<sup>9</sup> "Housing & Support." St. Ann's Center for Children, Youth and Families. December 18, 2018. Accessed March 24, 2019. <https://www.stanns.org/support>.

<sup>10</sup> Kelly, John. "A Historic Orphanage Becomes History Itself." The Washington Post. June 26, 2013. Accessed March 24, 2019.

Hospital and Fort Worth Medical Center. This program helps teen mothers care for their babies and for themselves.<sup>11</sup>

Faith House is a program that began in 1996. It is a transitional housing program for women and children experiencing homelessness. In 2013, Hope House was added due to the growing need. During their stay, they will receive mentoring and advising for life skills such as parenting, household management and nutrition and wellness. The homes have separate bedrooms and bathrooms with a shared kitchen. The transitional housing participants have access to all of St. Ann's support programs while still maintaining their independence.<sup>12</sup>

St. Ann's offers many educational courses. Some courses are for pregnant and parenting women to receive their high school diploma or GED. This is an important goal in St. Ann's mission because it creates a stronger foundation for supporting a family. For teen mothers, unplanned pregnancy has caused them to fall behind in their academic career. St. Ann's helps prepare these women to return to a school setting. St. Ann's also offers a pre-school program for the young children. This allows the children to develop at their own pace and gain confidence before entering the D.C. public school system.<sup>13</sup>

In 1949, St. Ann's began offering affordable child care services for working mothers. The mothers feel comfortable leaving their children with the devoted staff and are able to afford it while bringing in income. The infant and toddler program is also a unique service St. Ann's offers. Infants stay with the same caregiver for the

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<sup>11</sup> "Housing & Support."

<sup>12</sup> "Housing & Support."

<sup>13</sup> "Housing & Support."

first two years in order to develop trust and security. Both of these day care options allow for the mother to take steps towards her educational and career goals without having to worry about who is watching her child.<sup>14</sup>

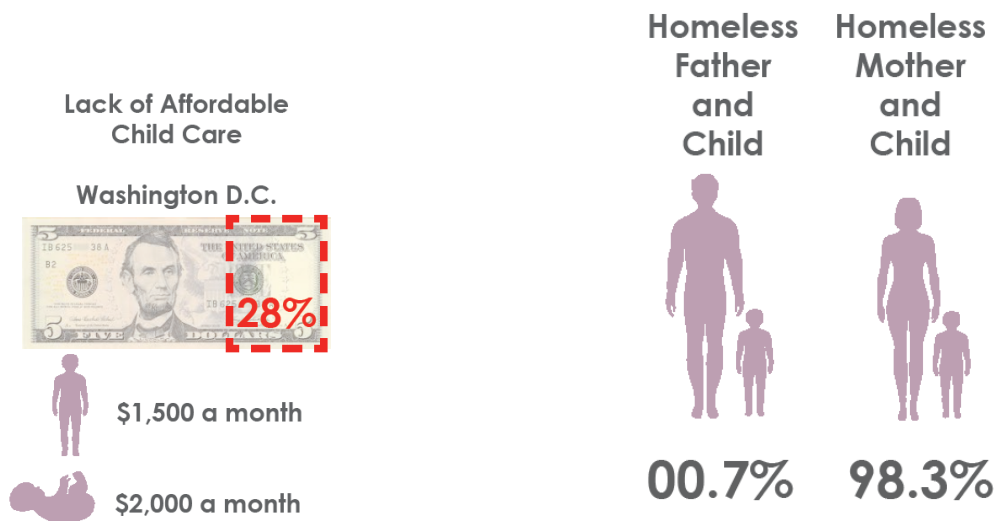


Figure 3, Lack of Affordable Childcare. (Source: Author)

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<sup>14</sup> "Housing & Support."

## Chapter 2: Determining Site Location

### St. Ann's Current Site

St. Ann's Center for Children, Youth and Families is currently located in Hyattsville, Maryland. Its property is right next to the Washington D.C. boarder. The neighborhood across the street is North Michigan Park in D.C. and is are not far from Catholic University. They moved to this location in 1963 in order to expand their facilities for the growing need to help more women and children.

The site currently consists of four buildings; two transitional housing apartment buildings, a chapel and one main building which offers the different services and support programs. These buildings sit on about 10.5 acres owned by the Archdiocese of Washington with a public park on the property. The main building was the original facility and the two transitional housing apartments were built in the last 20 years. The main building and chapel were built for St. Ann's by the archdiocese and houses their administration, living quarters, education facilities, day care, and counselling services. The total square footage of their buildings on site is about 242,000 square feet. However, this amount of square footage is not used to its full capacity.

St. Ann's location in Hyattsville, separates them from society. Driving by on Eastern Avenue, their presence is not known. In the 1960's this privacy was desired. St. Ann's was occupied by orphaned children and pregnant teenage girls. The young

girls' families sent them here to hide them during their pregnancy.<sup>15</sup> Therefore, the isolation during that time suited society's expectations.

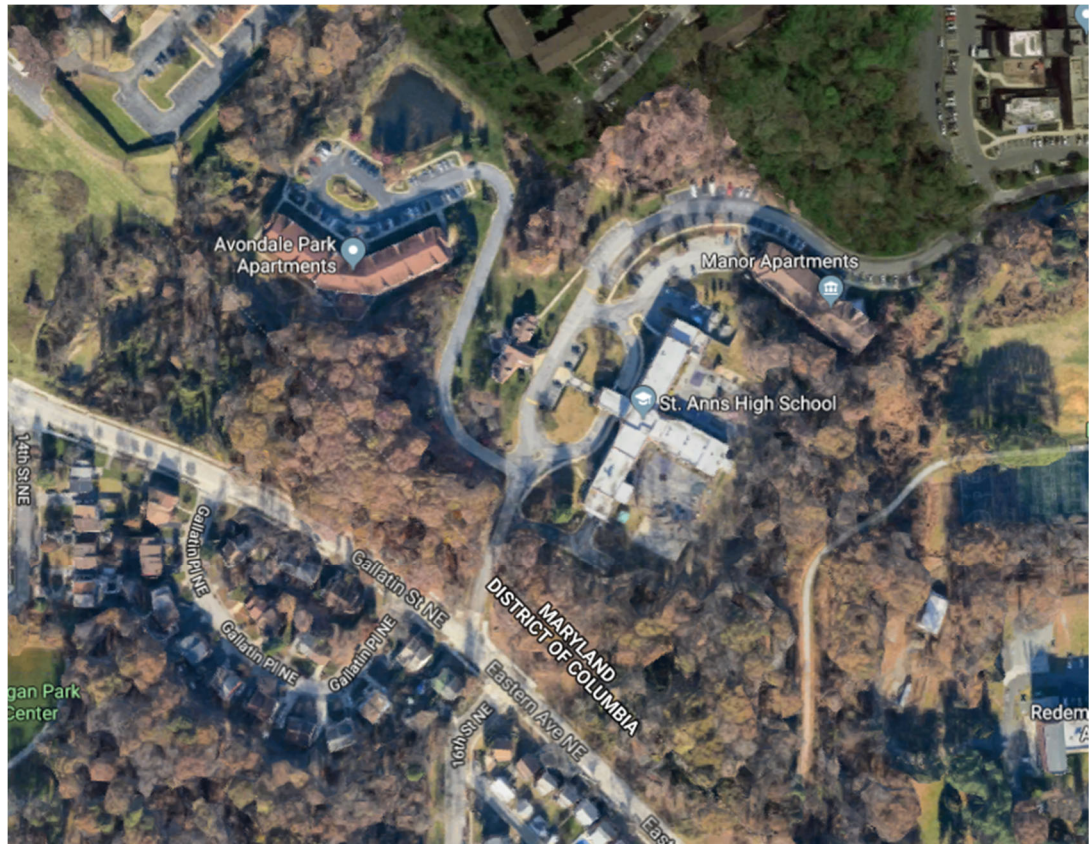


Figure 4, St. Ann's Current Site in Hyattsville, MD (Source: Google Earth)

These separating characteristics are still useful today for security and privacy reasons. However, once the mothers are ready to live on their own, this isolation makes it difficult for them to find nearby opportunities. The walk to the metro is about 25 minutes on streets that lack community and mixed uses. St. Ann's Center offers the support for these women to prosper; however, prospering, growth, and productivity are easier for an individual to achieve when the surrounding community is also prospering.

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<sup>15</sup> Bader, Mary Sr.





Figure 5, View of St. Ann's Main Building. (Source: Author)

### Proposed Site

This thesis will study the advantages of locating a transitional housing program for St. Ann's Center into an urban community. Immersing in a neighborhood where one can see others working and living, creates a more stabilizing environment for an individual. Being isolated can make it difficult for a person to be productive and driven.<sup>16</sup> Having nearby mixed uses will help these women become independent during their stay in the transitional housing. There can also still be a sense of privacy in an urban setting without the isolation quality. Being in an urban neighborhood will also gain recognition for St. Ann's which can lead to more donations and more volunteers.

Placing a piece of St. Ann's Center in Washington D.C. calls on its history and the impact it has made for this city. Most of the women and children in need are from D.C. and therefore it makes sense to have this program in the city it is helping.

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<sup>16</sup> "Benefits of Mixed-Use Development." Planning for Complete Communities in Delaware. Accessed March 29, 2019. <https://www.completecommunitiesde.org/planning/landuse/mixed-use-benefits/>.



This thesis is proposing the new transitional housing facility to be located on the corner of R street and Harry Thomas Way in NE Washington D.C. It is in walking distance to two metro stops and is in a fast-developing neighborhood. It has single family residential, multifamily residential and mixed-use buildings. It also remains close to Catholic University, which St. Ann's has close ties.



Figure 6, Proposed Site Location. (Source: Author)

### Financial Analysis for Site Locations

Over the past 10 months, St. Ann's Center has completed a report that studies the financial risks and rewards of their site. The board was debating whether to stay in

their current location and renovate or move into D.C. and build or renovate. Their final decision is to renovate their current building.<sup>17</sup> This decision is what prompted the idea of moving some of their program into D.C. as the next phase of independence for these women and children.

St. Ann's complex is very large and when asked about the occupancy, it was stated that the size will be very useful during the renovation because the programs can be moved to new wings of the building instead of having to move out during construction. Currently, two wings on two floors are not used by St. Ann's. Some is rented out to the Archdiocese for storage and the rest is used by the Catholic charities to provide their meal service program.<sup>18</sup>

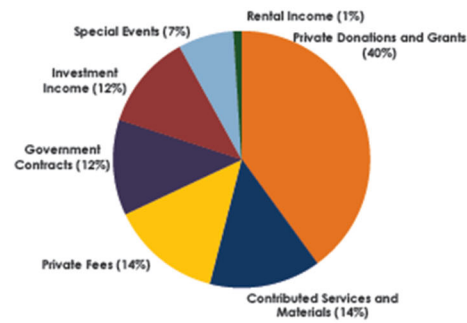
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<sup>17</sup> Bader, Mary Sr.

<sup>18</sup> Bader, Mary Sr.

## REVENUE FY2017

Private Donations and Grants	\$1,968,493	40%
Contributed Services and Materials	\$708,000	14%
Private Fees	\$663,507	14%
Government Contracts	\$577,905	12%
Investment Income	\$566,190	12%
Special Events	\$346,088	7%
Rental Income	\$58,508	1%
<b>Total Revenue</b>	<b>\$4,888,691</b>	<b>100%</b>



## EXPENSES FY2017

Teen Mother & Baby Program	\$1,306,130	28%
Child Care Center	\$1,206,869	26%
Transitional Housing Program	\$801,091	17%
General and Administrative	\$659,848	14%
Education and Employment	\$433,065	9%
Fundraising	\$300,955	6%
<b>Total Expenses</b>	<b>\$4,707,958</b>	<b>100%</b>

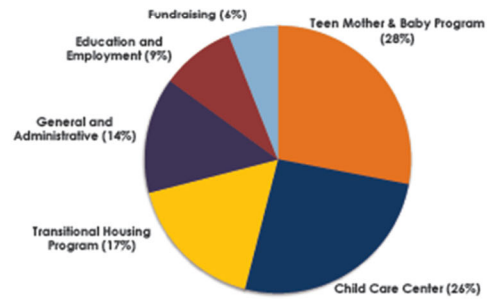


Figure 8, Breakdown of Revenue and Expenses for St. Ann's Center. (Source: Gelman, Rosenberg & Freedman Certified Public Accountants)

## Chapter 3: Empowering Women Through Design

### Introduction

This thesis focuses on designing a residential facility for young women and their children who are ready to graduate from St. Ann's Center in Hyattsville, MD. These families remain fragile and in need of support systems, but they are ready to take the next steps towards living independently. This chapter explores how design can influence healing families' success and productivity.

### Self-Sufficiency

#### Definition

Self-sufficient, means being able to satisfy one's own basic needs without help from others. St. Ann's welcomes women and children who are in need of a safe place while they get their life back on track. The focus is on women and children because homeless families are typically mother and child rather than father and child. During their stay, St. Ann's offers many services that help promote self-sufficiency such as the GED program and career counseling. Many women have had great success through St. Ann's programs.

To encourage long term self-sufficiency, it is beneficial to have graduation levels where the women gain more independence. They are able to live on their own, pay rent, but still have the support of St. Ann's behind them.

Characteristic	Participants		Comparison Group	
	Frequency	Percent	Frequency	Percent
<u>Race</u>				
White	1	.8	0	0
Black	129	99.2	58	100
<u>Sex</u>				
Male	2	1.5	1	1.7
Female	228	98.5	57	98.3
<u>Education</u>				
0-8 years	1	.8	2	3.4
9-11 years	13	10.0	13	22.4
12 years	78	60.0	25	43.1
Some College	30	23.1	17	29.3
Associate Degree	3	2.3	1	1.7
4 Year Degree	5	3.8	0	0.0
<u>Household Income</u>				
0-2,400	2	1.6	1	1.7
2,401-4,800	40	31.0	9	15.5
4,801-7,200	33	25.6	12	20.6
7,201-9,600	20	15.6	12	20.6
9,601-12,000	17	13.2	5	8.6
12,001-14,400	11	8.5	9	15.5
14,401+	6	4.7	10	17.2
<u>Resident of Public Housing</u>				
<u>When Applied to Program?</u>				
Yes	62	47.7	28	48.3
No	68	52.3	30	51.7

Figure 9, Demonstrating how family homelessness effects women more than men.

(Source: Rohe)

#### Programs and Examples

An evaluation on Charlotte's Gateway Family Program by William Rohe, offers helpful insight into creating self-sufficiency programs. The end goal for this program was for the participants to buy a home.<sup>19</sup> This idea is different than most

<sup>19</sup> Rohe, William M. "ASSISTING RESIDENTS OF PUBLIC HOUSING ACHIEVE SELF-SUFFICIENCY: AN EVALUATION OF CHARLOTTE'S GATEWAY FAMILIES PROGRAM." *Journal of Architectural and Planning Research* 12, no. 3 (1995): 259-77. <http://www.jstor.org.proxy-um.researchport.umd.edu/stable/43029166>.

other programs and proved to not be the best focus. However, when participants enter the program, they should establish their own individual goals. An aspect to be replicated from Charlotte's Gateway Family Program is that the graduation rate to self-sufficiency was about 7 years. This program took their time to help each participant with their individual needs.<sup>20</sup> In shorter self-sufficiency programs, it is not uncommon for participants to fall back into their same detrimental routine and consequently are unlikely to enroll in the program a second time.

Feedback from the participants provided helpful insight for future projects. One element that stood out is how the participants want their living situations to be formatted. They want to be surrounded by people in the same program in a clustered manner. Creating housing exclusively for people in this program will help create a supportive environment.<sup>21</sup>

Program Aspect	Frequency	Percent
The educational opportunity	72	55.4
The counseling and support provided by staff	46	35.4
Opportunity for low-rent housing	38	29.2
Opportunity to own a home	33	25.4
The child care provided	33	25.4
Opportunity for self-improvement, independence	25	19.2
Other	22	16.9
The benefits freeze	21	16.1
The rent freeze	16	12.3
The meetings and workshops	14	10.8
Job opportunities and job training	12	9.2
The escrow accounts	4	3.1
Transportation assistance	3	2.3

\*Participants were allowed to give up to three reasons. The frequencies indicate the number of participants who gave that reason as one of their answers.

Figure 10, Showing the programs that participants felt most helpful. (Source: Rohe)

<sup>20</sup> Rohe

<sup>21</sup> Rohe

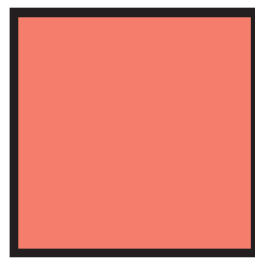
## Design Theory to Promote Self-Sufficiency

The United States Department of Housing and Urban Development (HUD) published a report outlining self-sufficiency best practices. These practices can be implemented into programmatic elements as well as the design of the building. Three that stood out are providing consistent follow up, self-esteem building, and tending to the whole family. Architectural design can help promote each of these practices.<sup>22</sup> Designing spaces for the social worker and participant to connect in person can create a better atmosphere for these consistent meetings. Building self-esteem can also be strengthened through design. One way is by creating dignified spaces that the participants enjoy occupying and want to maintain. A second way is to have the participants live in the same complex with common spaces so that they have a support system. Acknowledging the whole family instead of just the mother is another strong practice for self-sufficiency programs. Women will not be able to gain independence if they are worried about their children. This aspect comes through in both the program and design of the building.

Providing the necessary tools in order to help women become self-sufficient is very important to St. Ann's mission. Establishing another phase of independence will help with the success of their self-sufficiency program.

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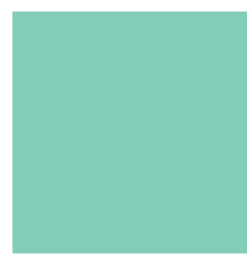
<sup>22</sup> Hungate, Joseph I., III. *Report to Congress on Family Self Sufficiency Best Practices*. Report. The U.S. Department of Housing and Urban Development. 2016.



Heavily supervised  
at St. Ann's Center



Supervised at St.  
Ann's Center



Supported in D.C.  
residential building

Figure 11, Graphic representation of families heading toward self-sufficiency

(Source: Author)

### *Traditional Spaces for Women*

#### Domestic Spaces

In order to design a productive and inspirational living facility for women and their children, it is interesting to understand how feminine spaces were traditionally designed. In the 19<sup>th</sup> and early 20<sup>th</sup> century spaces for women were designed around their household activities and chores.<sup>23</sup> This meant creating convenient space for women to accomplish their domestic activities such as arranging the kitchen close to the laundry. Planning a living space this way separated areas of the house.<sup>24</sup> This notion of defining space by division of labor is not used today but defining a space based the activities it holds is a helpful tool.

Spaces for women were also located towards the back of the house. Rooms facing the street were seen as more public and therefore not suitable for women who

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<sup>23</sup> Von Osten, Marion. "Sex and Space: Space/Gender/Economy." In *Altering Practices*, compiled by Doina Petrescu, 215-39. New York, NY: Routledge, 2007.

<sup>24</sup> Von Osten



were meant to be private.<sup>25</sup> Although, this is an outdated thought, locating private spaces away from the street is an organizational method that can benefit the design.

### Convents

Convents are an interesting building typology since they were designed and built for females. If a woman did not marry, she became a nun. In convents women were freer, more independent and better educated than in other realms of society.<sup>26</sup> This is a helpful metaphor for this thesis since the goal is to design ways for women and children to gain more independence and self-sufficiency. Convents can be viewed as a small city. The women lived, worked and studied in the same complex.<sup>27</sup>

Some design aspects from convents that can be translated for this topic are the colors and materials, the controlled site lines, the boundaries and the courtyard. Convents many times were white-washed to represent purity and discipline.<sup>28</sup> In this project, white walls can mean a new and fresh start. Controlled site lines and boundaries can be implemented for the children as well as for security reasons. Lastly, a courtyard building typology brings many benefits for the occupants including community, health and well-being.

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<sup>25</sup> Aksoylu, Yurdanur. "Courtyard House Form: Response to the Traditional and Modern Needs of Man." *Journal of Architectural and Planning Research* 4 (September 1987). Jstor.

<sup>26</sup> Hills, Helen. "Architecture as Metaphor for the Body: The Case of Female Convents in Early Modern Italy." In *Gender and Architecture*, edited by Louise Durning and Richard Wrigley, 67-99. New York, NY: John Wiley & Sons, Ltd, 2000.

<sup>27</sup> Hills

<sup>28</sup> Hills



Figure 12, Convent of St. Francis in Sorrento Italy demonstrating the courtyard, boundaries and white-washed walls. (Source: Nikolay Korzhov)

### *Courtyard Buildings*

This project looks at a courtyard building typology for a multifamily residence in Washington D.C. Women and children who are ready to gain more independence from St. Ann's current location and services, can graduate to this level of housing. A courtyard building is integral for the mission of this project for a few reasons.

First, a courtyard acts as a centering device. The families in this program come from unstable and sometimes dangerous living situations. Having a space that grounds and centers its occupants helps them gain confidence.

A courtyard allows the women and children to have privacy while being outdoors. Coming from St. Ann's Center in Hyattsville, where the entire campus is private, it would be difficult to adjust to the stark contrast of public and private in the urban environment. The courtyard acts as a threshold between the completely public, meaning the street, and the completely private, meaning the individual dwelling unit.<sup>29</sup>

A courtyard provides space for multi-purpose activities while promoting a sense of community within the building. Women and children in St. Ann's program need spaces to interact with one another in order to gain social support.<sup>30</sup> Mothers are able to get acquainted while their children play together.

Lastly, courtyard buildings have multiple health benefits for its occupants. Courtyards provide natural light and ventilation for the building.<sup>31</sup> It cools the building in the warm months and allows sunlight to penetrate in the cold months. Access to natural light on a daily basis helps a person's metabolism, immune system and sleeping habits.<sup>32</sup> This project will study the height and width of the courtyard in order to obtain the desired amount of light and air.

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<sup>29</sup> Aksoylu

<sup>30</sup> Aksoylu

<sup>31</sup> Aksoylu

<sup>32</sup> Genius, Stephen J. "Keeping Your Sunny Side Up: How Sunlight Affects Health and Well-being." Editorial. *Canadian Family Physician*, April 2006, 422-23.

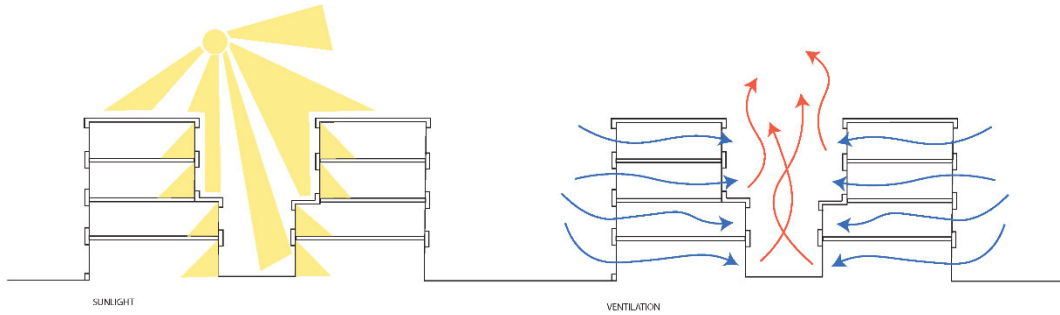


Figure 13, Diagram of courtyard using sunlight and natural ventilation. (Source: Author)

### *Calming and Productive Spaces*

#### Natural Light

As discussed in the previous section, access to natural light in a building has many health benefits for occupants. These benefits can help families become more self-sufficient. Incorporating natural lighting in the design throughout the project can create motivating spaces while helping the occupants' well-being.

Many of the women and children at St. Ann's have high stress levels and low self-esteem. Being exposed to natural light produces serotonin in the brain which "correlates with calmness and satisfaction". A lack of serotonin "links to depression and anxiety".<sup>33</sup> Serotonin makes people feel better and therefore they become more active, productive and have a positive outlook.<sup>34</sup> Sunlight also can positively affect

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<sup>33</sup> Park, Alice. "The Sun and Your Mood: Why Sunlight Is So Good for You." Time. August 07, 2017. Accessed April 26, 2019. <http://time.com/4888327/why-sunlight-is-so-good-for-you/>.

<sup>34</sup> Genius

your immune system, metabolism and sleep habits.<sup>35</sup> Being mentally and physically healthy will make it easier for families to succeed in this program.

Sunlight therapy has known to be used since 400BC. “Hippocrates, the father of medicine, routinely prescribed sun baths for people not feeling well.”<sup>36</sup> The body produces Vitamin D when exposed to sunlight. Vitamin D maintains healthy bones, supports the nervous system and helps manage diabetes. Many times, when women and children arrive at St. Ann’s they lack proper nutrition. St. Ann’s aids by providing healthy food options and daily vitamins; however, living in a healthy environment also helps this cause.

#### Dignified Space

Living in a dignified space is an important factor in promoting the productivity and self-sufficiency of the participants. Families in this program will not take care of their space if the building is old and not well maintained. If they are proud and enjoy where they live, they will want to maintain their dwelling unit as well as the common spaces themselves. Living in a dignified space will also encourage activity and lower anxiety levels.

#### Common spaces

Common spaces are another design strategy for the women in this facility. When they are at St. Ann’s in Hyattsville, they share a dining room where food is provided and they share bathrooms. Although, many of the girls desire to have more privacy and their own space, this strategy is very effective in encouraging women to

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<sup>35</sup> Park

<sup>36</sup> Genius

support each other. This sense of community might not be possible if they each had their own individual space.

This thesis project is meant to be a next step for the young women in order to gain their independence. They will pay rent for their own unit with a private bathroom, kitchen and living room. However, since this community and support from each other plays an important role in their healing and growth, it is essential to provide space for these encounters to happen.

## Chapter 4: Providing Space for Imaginative Development in Children

### Children in the St. Ann's Program

The children who stay at St. Ann's usually arrive with their mothers trying to escape a living situation. Their beginning years have been difficult. Other children are born at St. Ann's from their mothers seeking help during pregnancy. St. Ann's offers affordable daycare for these children as well as other children who live in the surrounding community. Affordable daycare is an important program element because it gives the mothers the ability to work or attend school. Many times, women and children become homeless because the mother cannot afford to take care of their child. An affordable daycare program will be incorporated in this thesis project. The children living in this facility will attend daycare on site until they can enroll in the public-school system. The following discussion explores design strategies for fostering mentally and physically healthy children

### Natural Playscape in Urban Environment

#### Purpose

The loss of outdoor play time has increasingly become more apparent with all-day structured activities for children as well as society's move towards urbanization. Outdoor play can still be implemented in urban environments. Less outdoor time

leads to attention disorders, limited sensory perception, and higher rates of obesity.<sup>37</sup>

Promoting outdoor play with natural landscape helps children learn about art and science while enhancing their social skills. Natural playscape is “intentionally designed playgrounds inspired by natural landscape features”.<sup>38</sup>

#### Positive Play Behaviors

Frequently, playgrounds are on an asphalt surface with fixed, plastic equipment and fenced in so that supervisors have an easy vantage point. Staff have noticed that the girls and boys separate into different areas and that there is more disruptive behavior.<sup>39</sup> This disruptive behavior could be from each piece of play equipment having a specific use. There is no imagination or uniqueness involved.

Natural play can promote exploratory, imaginative and cooperative play behaviors.<sup>40</sup> These are the types of behaviors that enhance the development and growth in children.

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<sup>37</sup> Kuh, Ponte, Chau

<sup>38</sup> Lisa P. Kuh, Iris Ponte, and Clement Chau. "The Impact of a Natural Playscape Installation on Young Children's Play Behaviors." *Children, Youth and Environments* 23, no. 2 (2013): 49-77. doi:10.7721/chilyoutenvi.23.2.0049.

<sup>39</sup> PERKINS, NATHAN H., and GEORGE ANTONIUK. "Designing for Children's Behaviours in Daycare Playgrounds." *Built Environment (1978-)* 25, no. 1 (1999): 66-70. <http://www.jstor.org.proxy-um.researchport.umd.edu/stable/23289145>.

<sup>40</sup> Kuh, Ponte, Chau. Perkins





Figure 14, St. Ann's Current Playground: fixed plastic equipment on asphalt.

(Source:Author)

#### Design Elements

Design elements for natural play should be unique and site sensitive.<sup>41</sup> This being said, natural play equipment can coexist with traditional equipment such as slides and swings.<sup>42</sup> Having flexible spaces and equipment that can be utilized in

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<sup>41</sup> Perkins

<sup>42</sup> Kih, Ponte, Chau

different ways, allows children to make their own decisions and come up with unique ideas.<sup>43</sup> Sandboxes are exactly what their name entails. Sand is bordered so that it stays in its designated location. Providing a sand pit, where sand is not constrained proved to keep children's attention for longer.<sup>44</sup> They were also using wood and rocks with their plastic shovels in the sand. Some other materials that are used in natural playscape are stone, water, sticks, and pinecones.<sup>45</sup> Interacting with nature by climbing, running, and building is important for children's emotional and physical well-being.<sup>46</sup>



Figure 15, Kids playing in an uncontained sand pit. (Source: Kuh, Ponte, Chau.)

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<sup>43</sup> Kuh, Ponte, Chau

<sup>44</sup> Kuh, Ponte, Chau

<sup>45</sup> Kuh, Ponte, Chau

<sup>46</sup> Kuh, Ponte, Chau and Wake

### Implementing Rudolf Steiner's Theories

#### Spirituality

Rudolf Steiner had thought-provoking beliefs on the environment, human beings, spirituality and teaching. He believed that children are spiritual gifts from heaven and that teaching is a service to God.<sup>47</sup> His view of the environment consists of spirituality and matter and his guiding principal to teachers was to help humanity arrive at a more spiritual earth. His goal was to awaken the spirituality that is already in each person and to create noble and imaginative humans.<sup>48</sup> Steiner believed that art and architecture help understand spirituality and these tangible forms Bring the spiritual into the earthly world.”<sup>49</sup>

#### Art and Architecture

Steiner also had similar opinions to the previous discussion of natural play. The buildings he designed and the Waldorf schools designed from his teachings are organic and blend with the landscape. The toys provided are not always finished, such as a doll without facial features, so that the children will finish the object with their imagination.<sup>50</sup>

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<sup>47</sup> Uhrmacher, Bruce. "Chapter 5: An Environment for Developing Souls: The Ideas of Rudolf Steiner." *Counterpoints* 263 (2004): 97-120. <http://www.jstor.org.proxy-um.researchport.umd.edu/stable/42978546>.

<sup>48</sup> Uhrmacher

<sup>49</sup> Uhrmacher

<sup>50</sup> Uhrmacher

Steiner also has an interesting system of color use. Colors affect people's moods, abilities and imagination. The younger children should be surrounded by warm tones such as reds and oranges. These colors are similar to being inside the womb. As children get older, the colors change to yellows and blues since they are moving from feeling to thinking.<sup>51</sup>

Steiner's views align with the mission of St. Ann's. St. Ann's does God's work by teaching and helping those in need. St. Ann's also instills children with the foundations necessary to become spiritual and noble human beings.

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<sup>51</sup> Uhrmacher

## Chapter 5: Precedent Analysis

### Purpose

The following sections focus on architectural models of community that can assist in the program, design strategy and building configuration for this thesis project. The first project discussed is a monastery designed by Le Corbusier. This is an interesting comparison since St. Ann's Center is run by nuns from the Daughters of Charity. The second project is a multi-family residential building called BIGyard. Located in Berlin, Germany. The site and residential style relates more closely to this project being an urban infill in Washington, D.C.

### Sainte Marie de la Tourette

#### Project

The convent of La Tourette was completed in 1960 and was Le Corbusier's final project in Europe. It was also considered one of his most unique ventures since it was designed for silent monks.<sup>52</sup> La Tourette was an addition to the existing monastery for Dominican friars which was located in the city.<sup>53</sup>

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<sup>52</sup> Souza, Eduardo. "AD Classics: Convent of La Tourette / Le Corbuiser." ArchDaily. December 15, 2010. Accessed May 23, 2019. <https://www.archdaily.com/96824/ad-classics-convent-of-la-tourette-le-corbuiser>.

<sup>53</sup> Coleman, K. "Le Corbusier - Sainte-Marie De La Tourette - Eveux France." Accessed May/June, 2019. [http://www-bcf.usc.edu/~kcoleman/Precedents/ALL PDFs/Corbusier\\_LaTourette.pdf](http://www-bcf.usc.edu/~kcoleman/Precedents/ALL PDFs/Corbusier_LaTourette.pdf).



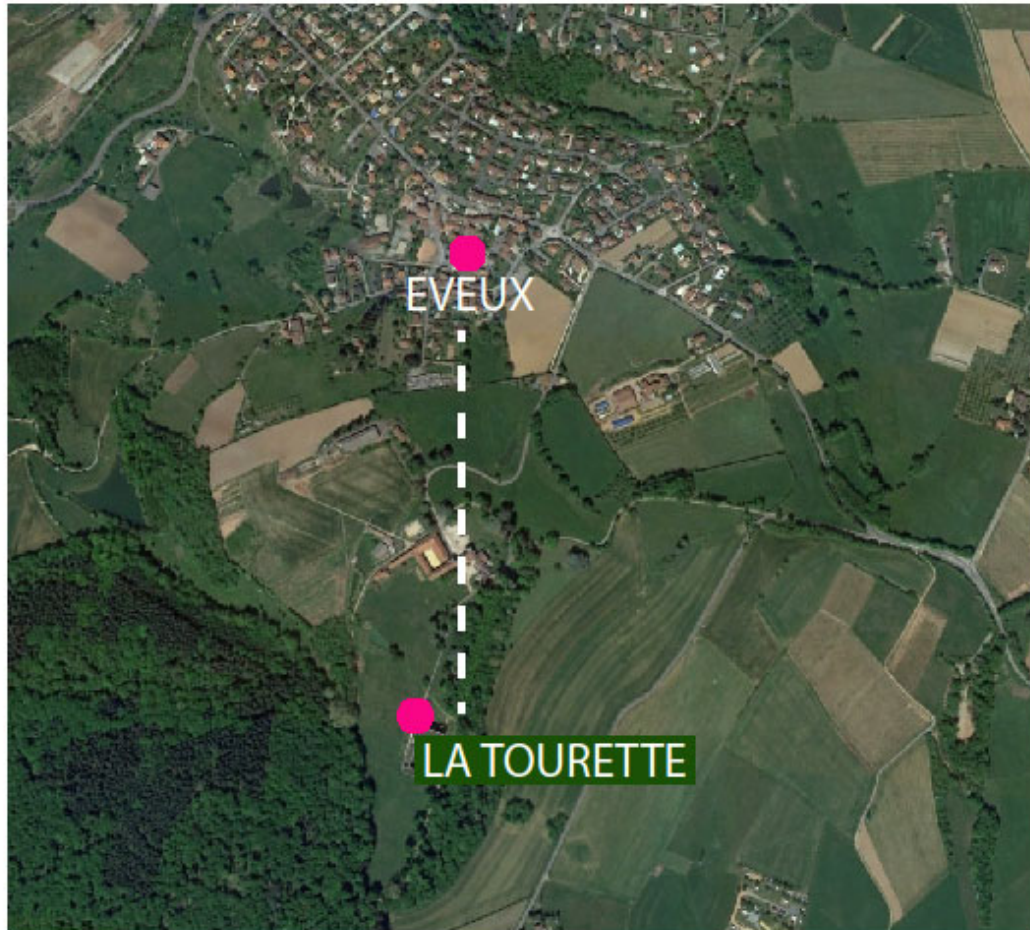


Figure 16, La Tourette located in the country side South of the city. (Source: Author)

Le Corbusier chose this sloping site out in the country-side of Lyon, France in order for the monks to have peace and silence.<sup>54</sup> The steep terrain which allows for maximum views was preserved by Le Corbusier since the building is lifted off the ground by concrete piles. The hillside continues to slope under the monastery.<sup>55</sup>

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<sup>54</sup> Souza

<sup>55</sup> Coleman



Figure 17, La Tourette's sloping terrain. (Source : Utzonphotos)

The design strategies Le Corbusier implements are very intriguing and beautiful. He is able to make concrete forms seem delicate and robust at the same time. The thick concrete floors are held up by the airy piles and the heavy walls are interrupted by elegant glazing interspersed with light concrete columns. He uses both slender and thick forms of concrete. Another design strategy he explores is manipulating the way light enters the building. Sunlight is a major aspect of La Tourette's design. Each room is curated around day light whether the light is mainly obstructed or is let in entirely. Le Corbusier played with day light in all of his projects, but it is important in La Tourette because the light and dark environments are reminiscent of heaven and earth.<sup>56</sup>

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<sup>56</sup> Coleman





Figure 18, Variety of concrete forms. (Source: ArchDaily)



Figure 19, Light shafts in chapel over tiered altars. (Source: Texas Tech University)



This late modernist style monastery acted as a self-contained community for the Dominican monks. They lived there and had all of their needs met in one building.<sup>57</sup> Today, the monastery acts as a research center for philosophers but it is also a place tourists and architects can stay.<sup>58</sup>



Figure 20, View of La Tourette's West façade. (Source: LSU CoAD)

### Program

The program of La Tourette was simple even though it contained all necessary aspects for the monks to live. Some of these elements include sleeping rooms, dining hall, library, cloister, classrooms, recreational hall, and a church.<sup>59</sup> All of these areas

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<sup>57</sup> Souza

<sup>58</sup> Coleman

<sup>59</sup> Souza

are centered around a courtyard, which calls upon of the traditional monasteries and convents.<sup>60</sup> There are 100 individual sleeping rooms, each measuring 8x24 feet including an outward facing balcony.<sup>61</sup> These narrow rooms have been criticized<sup>62</sup> but the purpose was to bring in fresh air and for the monks to have their necessary confinement time.<sup>63</sup>

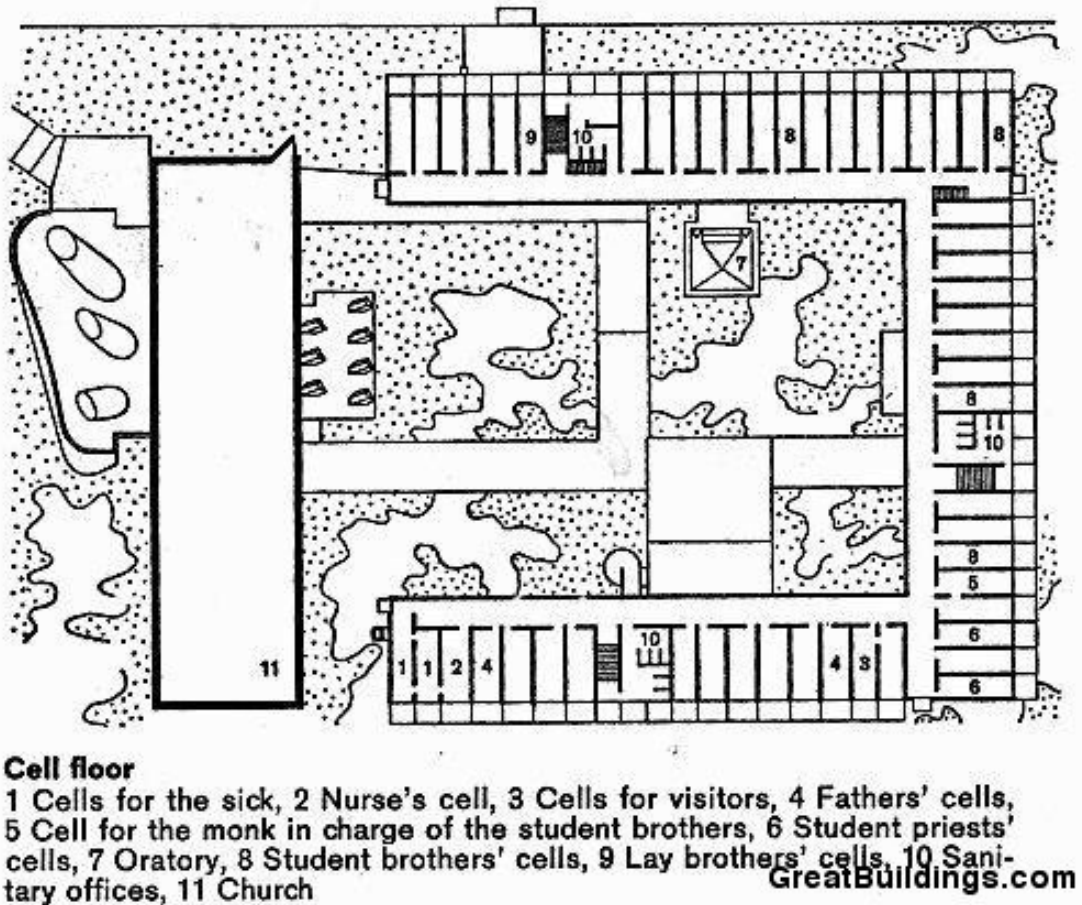


Figure 21, Floor plan showing the long, narrow sleeping rooms. (Source: ArchDaily)

<sup>60</sup> Coleman

<sup>61</sup> Coleman

<sup>62</sup> Souza

<sup>63</sup> Coleman

# REVERSE ENGINEERING: LA TOURETTE, LE CORBUSIER

FLOOR	PROGRAMS	CATEGORIES	SQUARE FOOTAGE	TOTALS	SQRT
	RESIDENTIAL				
1ST FLOOR		bathrooms	127		11.26943
2ND FLOOR		sleeping rooms (162 each)	8424		91.78235
		bathrooms	1453		38.11824
TOTAL			10004	10004	
	COMMUNITY SPACE				
1ST FLOOR		refectory	2674		51.71073
		common rooms	2315		48.11445
		oratory	471		21.70253
2ND FLOOR		conversation cells	972		31.17691
		library and reading room	2404		49.0306
		lecture rooms	2695		51.91339
TOTAL			11531	11531	
	RELIGIOUS SPACE				
1ST FLOOR		church	8162		90.34379
		chapter room	1777		42.15448
2ND FLOOR		church	5800		76.15773
3RD FLOOR		church	5382		73.36212
TOTAL			21121	21121	
	OUTDOOR SPACE				
1st floor			6310		79.43551
2nd floor			0		0
3rd floor			3680		60.663
TOTAL			9990	9990	
	SERVICE		0 0 0		
	CIRCULATION				
1st floor			4339		65.87109
2nd floor			9542		97.68316
3rd floor			2616		51.14685
TOTAL			16497	16497	
TOTAL				69143	

Figure 22, Program inventory of La Tourette. (Source: Author)

## Relationship to St. Ann's Unity House

Three words that can summarize a monastery are peace, spirituality and community. These three elements are also very important aspects for this thesis project. The purpose of this housing facility is to stabilize families, and help them become self-sufficient. Being able to incorporate peace, spirituality and community can assist families in achieving this goal. Peace can be integrated into the design through textures, colors, and nature. Bringing in daylight and incorporating a non-denominational chapel can provide the spiritual healing aspect. Fostering a community can be instigated by a central courtyard and a variety of common spaces.

Some of the programmatic elements that will be incorporated in this thesis are the dwelling units, common rooms, courtyard, and chapel. The dwelling units, however, will be the private home for these families. They will not be sharing bathrooms and kitchens like at La Tourette or St. Ann's Center. The courtyard is a space that can bring people together in order to promote a community. La Tourette's courtyard is enclosed which can give a sense of security. This enclosure could be a beneficial attribute for the families. La Tourette has many unique qualities and design strategies that can be incorporated into this thesis project.

## BIGyard

### Project

BIGyard is an ambitious co-housing project by Zanderroth Architekten in Berlin, Germany. Completed in 2010, this multi-family residential building has created private homes in a dense urban environment. It is the ultimate synthesis of privacy



and community.<sup>64</sup> These beautiful homes were also very affordable. The architects worked directly with private owners instead of developers since developers would never take a risk on this co-housing project.<sup>65</sup>



Figure 23, BIGyard site in Berlin, Germany. (Source: Author)

As the image above shows, the apartments at BIGyard are surrounded on three sides with the North elevation facing the street. Although the two bars create a long open-ended courtyard, it is actually closed off and private from the surrounding buildings. The roof gardens for each unit make BIGyard blend into the street trees.

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<sup>64</sup> Cardenas, Daniela. "BIGyard / Zanderroth Architekten." ArchDaily. August 16, 2016. Accessed May 24, 2019. <https://www.archdaily.com/793287/bigyard-zanderroth-architekten>.

<sup>65</sup> Archipreneur. "Urban BIG YARD: Co-Housing by Zanderroth Architekten." Archipreneur. October 05, 2018. Accessed May 23, 2019. <https://archipreneur.com/urban-bigyard-co-housing-development-zanderroth-architekten/>.

The green roofs and linear courtyard distinguishes this project from the typical buildings in Berlin.

### Program

Forty five individual homes make up these two linear bars.<sup>66</sup> There are twenty three townhomes, ten summer houses and 12 penthouses.<sup>67</sup> This variety allows for more density as well as a more diverse community. The northern building facing the street is four stories high. The southern building is three stories high as to not block the sunlight. The courtyard is raised from ground level by one floor to allow a parking garage as well as to receive more light.<sup>68</sup>

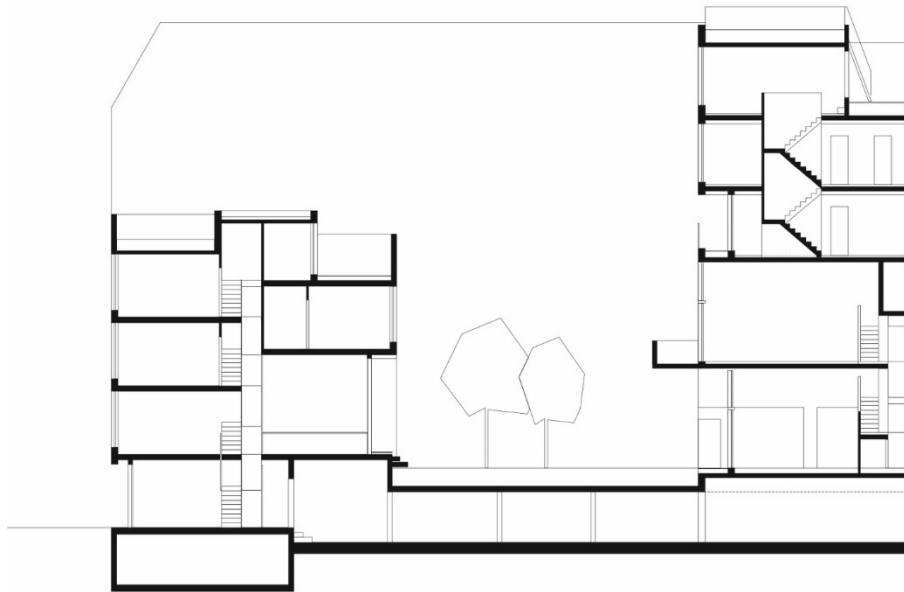


Figure 24, Section of buildings and courtyard showing height difference. (Source: ArchDaily)

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<sup>66</sup> Cardenas

<sup>67</sup> Archipreneur

<sup>68</sup> Cardenas

The individual homes have private bedrooms, baths, kitchen, living, dining, and terrace. Some of the shared programs include the courtyard, common roof terrace, a sauna and four guest apartments.<sup>69</sup>



Figure 25, Private roof terraces and roof gardens. (Source: ArchDaily)

#### Relationship to St. Ann's Unity House

The single mothers who stay at St. Ann's support each other in order to succeed. Promoting the support of one another plays a large role in families achieving self-sufficiency. This is why having a sense of community is so important. The orientation of the buildings to the courtyard in the BIGyard project has an emphasis on

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<sup>69</sup> Cardenas



community. Balconies are oriented towards the courtyard with direct access from each home, creating a village effect in the middle of a city. The residents can be in a public space while still in the privacy of their own home.



Figure 26, BIGyard Courtyard. (Source: ArchDaily)

Sunlight is another strategy that will play a large role in the design of this thesis project. Access to sunlight has many positive effects on humans both mentally and physically. Multi-story single homes ensure more sunlight into each individual unit as opposed to typical apartments that layout on a single floor. Apartments located on the



first or second floor get the least amount of sunlight. Having multiple stories and even a rooftop terrace eliminates this issue.



Figure 27, Light entering upstairs bedroom facing courtyard. (Source: ArchDaily)

La Tourette and BIGyard are both very different building typologies, however, they both contain helpful techniques for this thesis project. Some of these techniques include courtyards, common spaces, sunlight, materials, and programmatic elements.

## Chapter 6: Building Program

### St. Ann's Center Programmatic Needs

St. Ann's Center takes in women and children who are either in a dangerous living situation, at risk of becoming homeless, or who currently are homeless. Each of these families are in varying situations and therefore are placed in different St. Ann's programs based on their individual needs. These different family dynamics include, a mother and child, a pregnant woman, a pregnant teenager, a woman in danger and a child in danger. St. Ann's Center has various programs in place to support all of these situations.

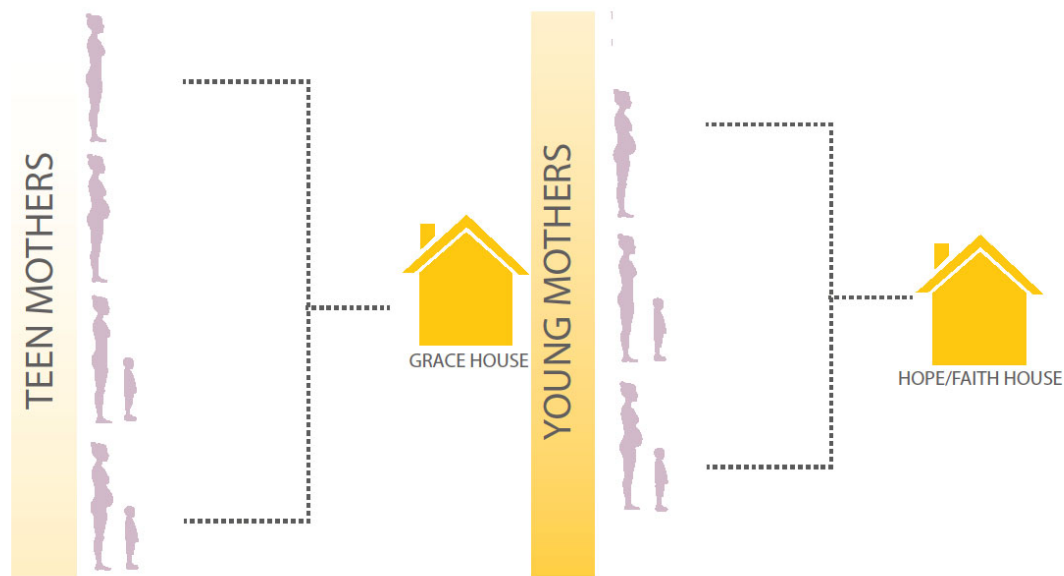


Figure 28, St. Ann's Center Programs. (Source: Author)

This thesis aims to provide a living space for mothers who are ready to become more independent from St. Ann's Center. St. Ann's Unity House acts as the

bridge between St. Ann's Center and society. St. Ann's does offer transitional housing once these families have graduated; however, it is similar to dorm living. They are private dwelling units with shared kitchens and living spaces. This arrangement has its benefits because shared spaces encourage community and support of one another.

This thesis project takes this independence to the next phase. The new living facility for these families will be in Washington D.C. where more opportunities and amenities are nearby compared to the Hyattsville location. The mothers will be working, paying rent, and taking care of their children. They will be living on their own but the support of St. Ann's will not be far and the support of mothers with similar life experiences will surround them.

### *Building Program Analysis*

#### Dwelling Units

Currently St. Ann's Center helps about 50 families a year. Not all of these families graduate to transitional housing. Some stay in certain programs for longer, and some leave St. Ann's entirely. This thesis project is expecting to have about 40 dwelling units. This number is based on the amount of families that St. Ann's helps in a year as well as the fact that families might stay in transitional housing for a few years. Being able to stay for a longer period of time helps ensure a family's self-sufficiency for the long term.

These units will vary in size to accommodate different family proportions. This means efficiencies to two-bedroom units. This housing facility will take a few years

before it reaches capacity. Each dwelling unit will have a private kitchen, bath, living room, dining room, bedroom/bedrooms, and balcony. The square footage will range from 400sf to 900sf to accommodate varying family sizes.

#### Amenities

Being proud of where one lives makes self-sufficiency more possible. Dignified spaces help people want to take care of that space and to not return to anything less. Amenities promote dignified spaces. Some amenities that are included in this program are a courtyard, meditation room, fitness center, library, shared workspace, shared kitchen, and common rooms and porches. The common rooms will range in size to include more private settings and more public gatherings. Incorporating shared amenity space encourages community and support.

#### Mixed-use

Many times, women end up at St. Ann's Center because they cannot afford child care in their current occupation and do not have a reliable family member. St. Ann's offers affordable daycare for the mothers in their program as well as families in the surrounding neighborhood. An affordable day care center is an important piece of the program for this thesis project. The mothers can go to work and not worry about who is watching their child or how much it is going to cost.

A second mixed-use element that will be implemented is a type of retail such as a coffee shop, bakery or drycleaner. Retail will help immerse this specialized living facility into its surrounding society. It is also necessary for this retail to be something

that residents will always use. It cannot be space that constantly gets turned over to new owners.

PROGRAMS	CATEGORIES	NUMBER OF ROOMS	INDIVIDUAL SQUARE FOOTAGE	SQUARE FOOTAGE	TOTALS
RESIDENTIAL					
	1 Bedroom Dwelling Units (700sf each)	30	800	24000	
	2 Bedroom Dwelling Units (1000sf each)	30	1100	33000	
TOTAL				57000	57000
COMMUNITY SPACE					
	Common Rooms	5	200	1000	
	Common dining area			2500	
	Library/Media			1500	
	Rooftop Indoor Amenity			4000	
	Gym			2500	
	Meditation room			1000	
TOTAL				10500	10500
RELIGIOUS SPACE					
	Chapel			8000	
	Classroom			2000	
TOTAL				10000	10000
OUTDOOR SPACE					
	Courtyard			10000	
	Rooftop Outdoor Amenity			5000	
	Garden/Lawn			80000	
				815000	815000
MIXED USE					
	Day Care			5000	
	Retail			2000	
				7000	7000
SERVICE					
	Parking			15000	
	MEP			3000	
	Storage			2000	
	Circulation			10000	
				30000	30000
				929500	

172008

Figure 29, Program engineering spreadsheet. (Source: Author)

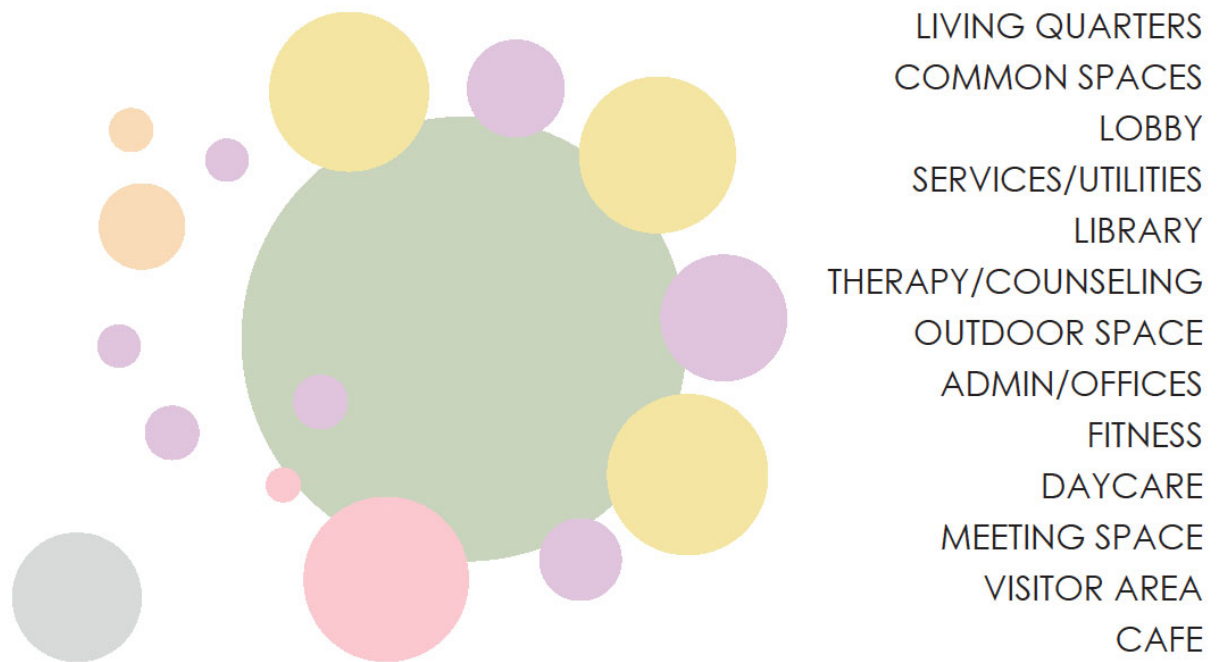


Figure 30, Graphic representation of program. (Source: Author)

### Programming Outdoor Space

St. Ann's currently has ample outdoor space on their site. This aspect helps create a private and protected environment for these families. This thesis intends to maintain a sense of protection and security for these women and children but it also intends to help immerse them back into society where they won't always have maximum privacy.



Figure 31, St. Ann's site boundary showing open space. (Source: Author)

Outdoor space plays a major role in this project because it promotes health and well-being for these families. The courtyard acts as an enclosed outdoor space, shielded from the outside world. However, there will be other outdoor spaces that are more permeable to the public. This includes the play area for the daycare and green space designed for the public. The spaces designed for families at St. Ann's will not be accessible to the public but they will not be completely shielded from view.

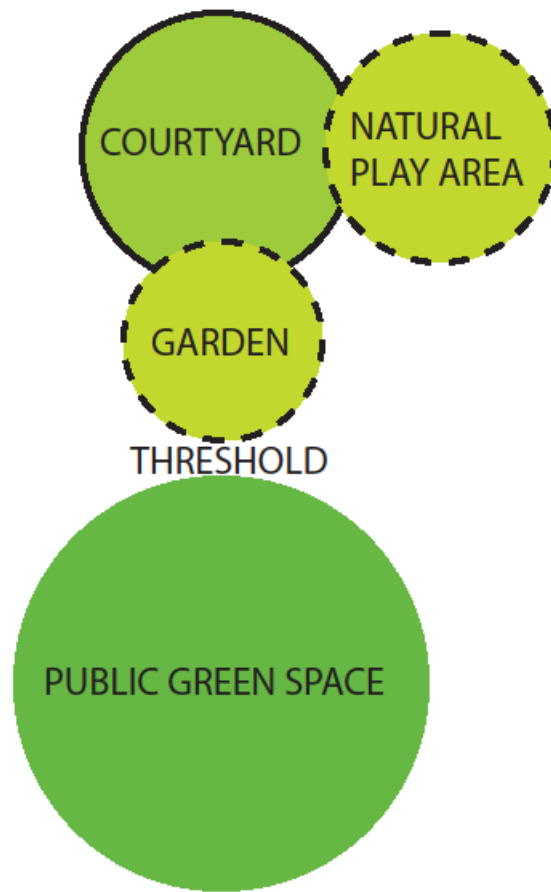


Figure 32, Diagram of outdoor space adjacencies. (Source: Author)



## Chapter 7: Site Analysis

### Location

The proposed location for this thesis project is in NE Washington, D.C. Locating this specialized housing facility in D.C. calls on St. Ann's history. St. Ann's Center was originally based in NW Washington D.C. and served the surrounding communities. They relocated to Hyattsville in 1960 for more space and privacy. Bringing a transitional housing facility into D.C. for St. Ann's is reminiscent of its historical context and also provides more nearby amenities and opportunities for the families to gain independence.

This proposed site remains close to the Hyattsville location as well as Catholic University. Catholic University is important to St. Ann's not only because St. Ann's is supported by the Catholic Archdiocese of Washington or that many of the nuns graduated from Catholic University, but because some of the volunteers that help St. Ann's are Catholic University students. This way, volunteers will still have a convenient commute if they are needed at this location.



Figure 33, Location of site in Washington, D.C. (Source: Author)

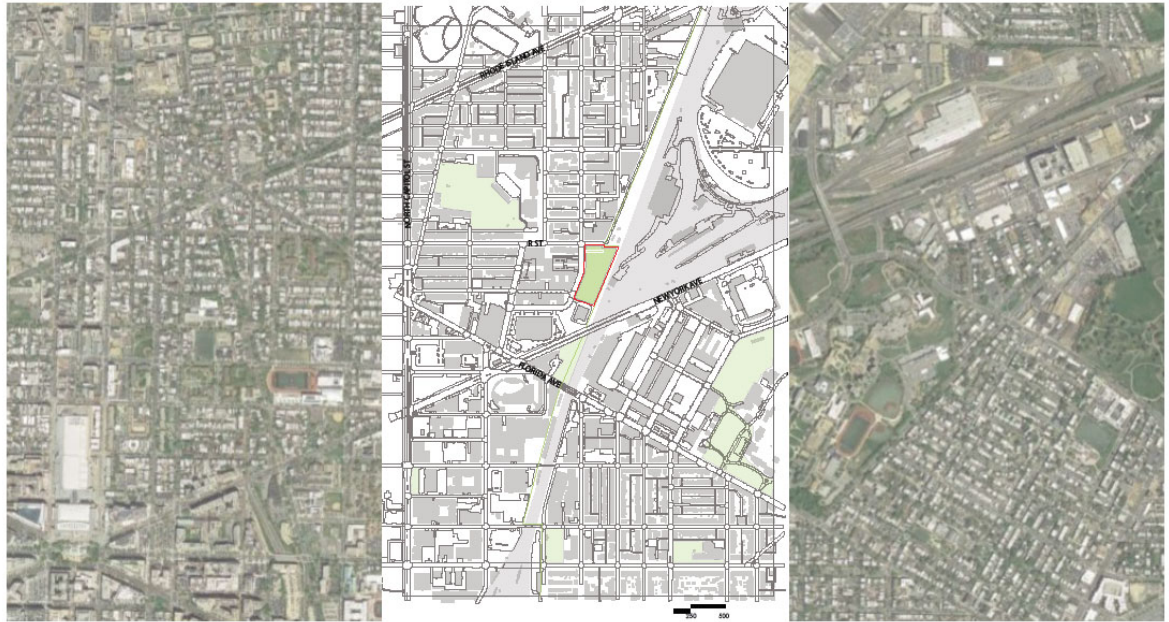


Figure 34, Site Location. (Source: Author)

### Nearby Amenities

Having nearby amenities is an important determinant for selecting a site. Convenient amenities and opportunities make it easier for these families to become self-sufficient. This site is in walking distance to two metro stops. The NoMa stop is a 5-minute walk South and the Brentwood stop is a 10-minute walk North. Both can be directly accessed by the Metropolitan Branch Trail that run along the back of this site. This is a nice amenity for walking and biking to different D.C. neighborhoods. The part of the trail that goes behind this site has a concrete wall to separate the trail from the adjacent railyard. This wall is painted with murals by local artists once a year. The neighborhood surrounding the site has both multifamily residential buildings and single-family row houses. This aspect makes the site a good candidate for another type of multi-family housing. Union Market is a nearby amenity SE to this site. There



is also a Harris Teeter located about a 7-minute walk. Schools were also an important amenity to consider when selecting this site. The program of this thesis includes a daycare and preschool. Once the children are old enough, they will be enrolled in the public-school system. This site has both an elementary school, middle school and high school within walking distance.

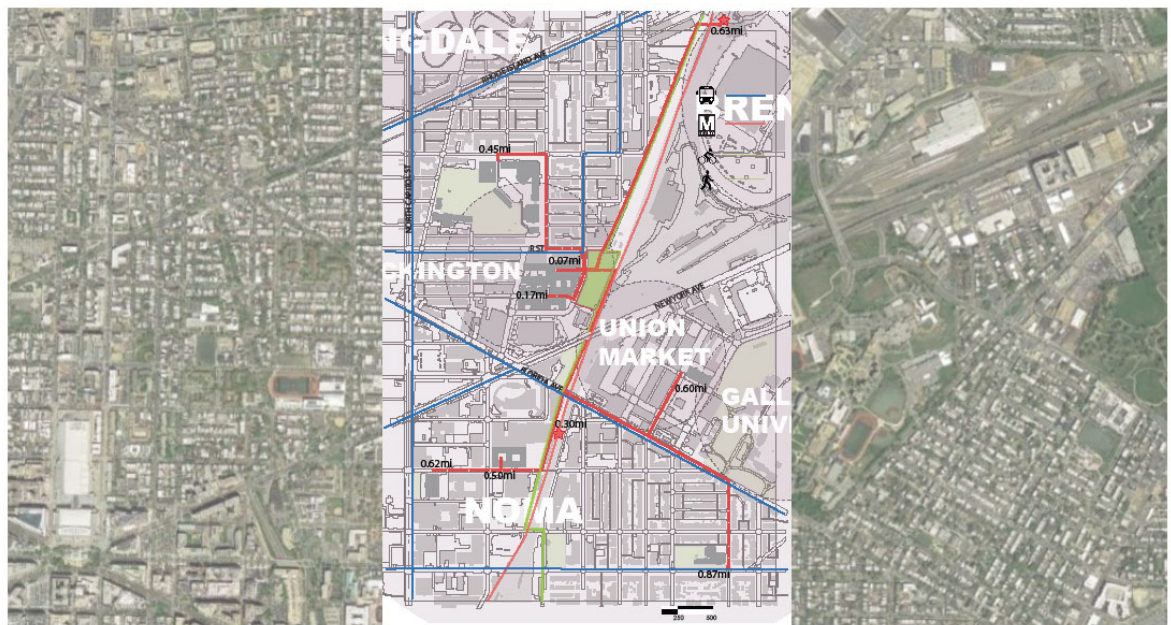


Figure 35, Diagram of nearby amenities, neighborhoods and public transportation.  
(Source: Author)

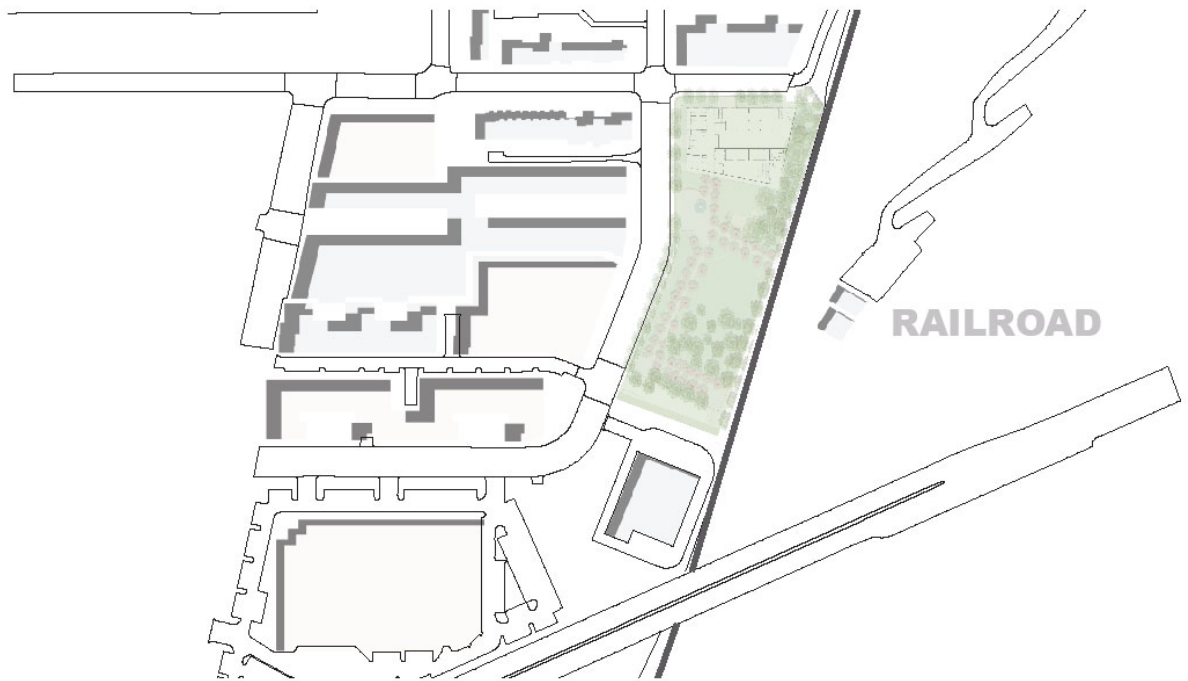


Figure 36, Site Plan. (Source: Author)

### Zoning

This 3.7 acre lot is divided into two zoning sections. The northern part is in a PDR-2 zone. This means it is subject to medium density for light industrial purposes. The maximum height is 60ft. The southern section is in a PDR-4 zone. This means it allows high density for industrial purposes and has a maximum height limit of 90ft. Currently, there is a PUD for the Southern site to be a multi-family residential building.

This site sits along an industrial edge of the city where, for many years there was no community or activity. Recently more development has been emerging along this corridor including across the street from this site. A large multi-family residential building is currently under construction directly West of the site. It also incorporates a

pedestrian street through the project with mixed-use retail on the building base. This new project is an example of how a community is emerging in this location.

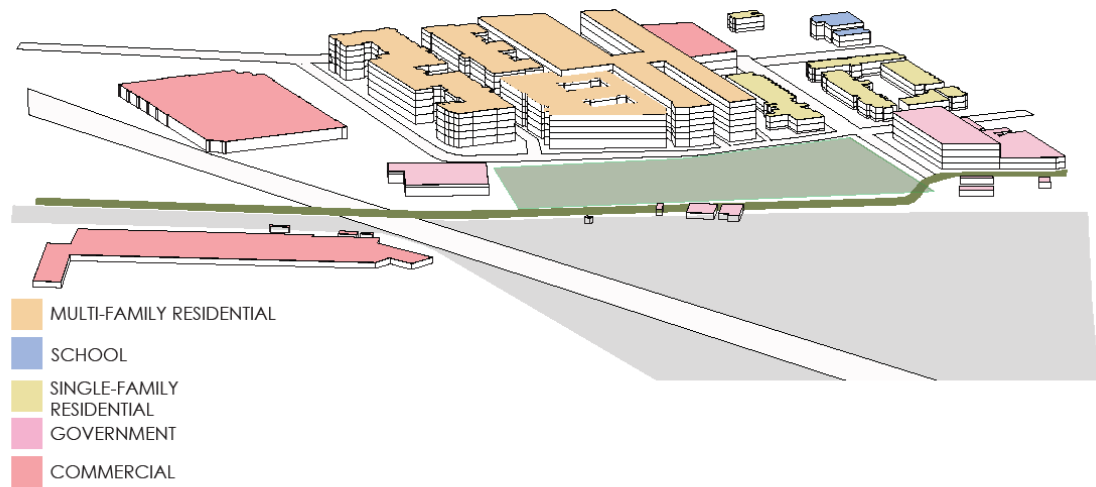


Figure 37, Surrounding Landuses. (Source: Author)



Figure 38, Surrounding Context. (Source: Author)



Figure 39, Development across the street from site called Eckington Yards (Source: JBG Smith)

## Diagramming the Site

### Obstacles

This site was chosen for its central location, availability of outdoor space and convenience to nearby amenities and public transportation. With this great location, there are some challenges that will influence the design. One is being right next to the railroad tracks where Amtrak and Metro will be rolling through every few minutes. At the site, however, the noise of the trains are not significant, no more so than the construction and ambulance sounds typical in an urban context. When standing on the Metropolitan Branch Trail, in between the site and the railyard, the decibel level is an average of 37dB without any distinguishable noises. When a train does go by, the decibel level jumps to an average of 54dB. There is a noticeable louder sound; however, when an ambulance drives by on the street the decibel level has an average of 110dB. The trains sound more similar to a large truck driving down the street. One strategy to remediate this challenge is to create a buffer between the railyard and the proposal of a transitional housing facility for St. Ann's.

### Program

The program for this thesis project easily fits on this large site. This way there is ample room for outdoor space. The diagram, below demonstrates the amount of square footage for each program element and how it fits on the site. The diagram is as if everything was one story high. Once these programs take up multiple stories, there is a large amount of green space left over for both private and public use.



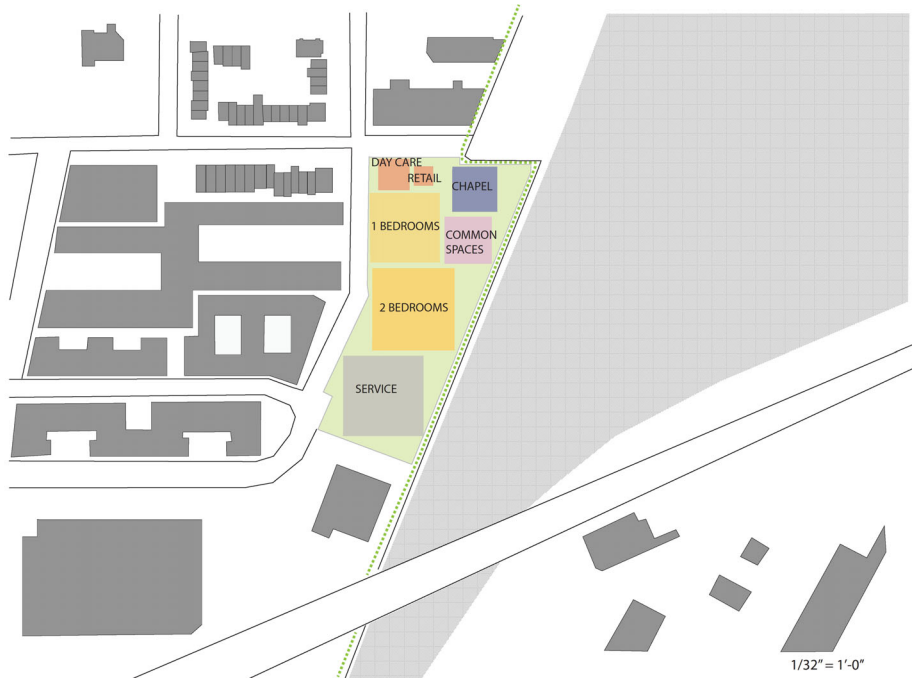


Figure 40, Diagram of program square footage on site. (Source: Author)

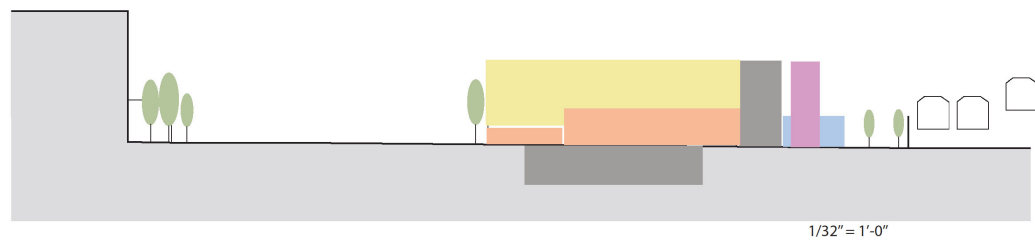


Figure 41, Site section with programmatic stacking. (Source: Author)

## Site Schemes

Some initial thoughts regarding site layout is to use the Northern portion for the building and designate the Southern part of the site as a garden for the residents and a park for the public. This way the residential building will have direct exposure to sunlight.

The first scheme shown below has the built structure further to the left of the site. The main idea behind this arrangement was to create a greater distance between the building and the railyard. In this diagram the daycare center is separated and attempts to close off a sei-courtyard.

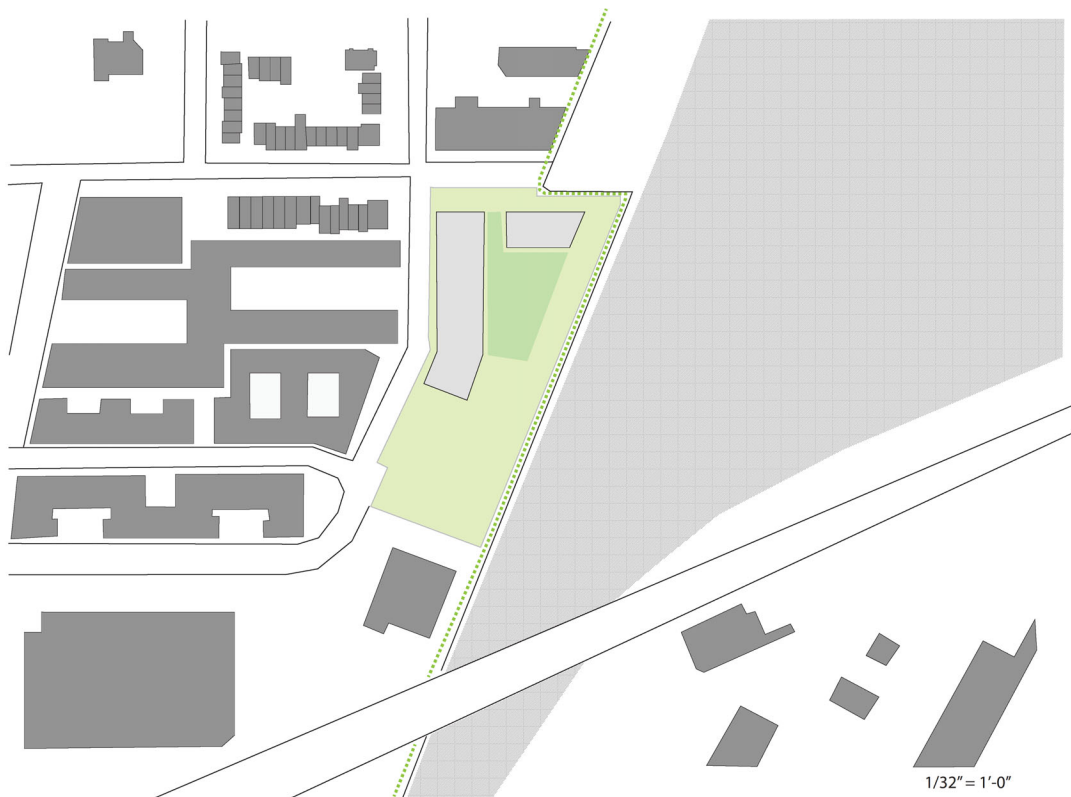


Figure 42, Scheme 1. (Source: Author)

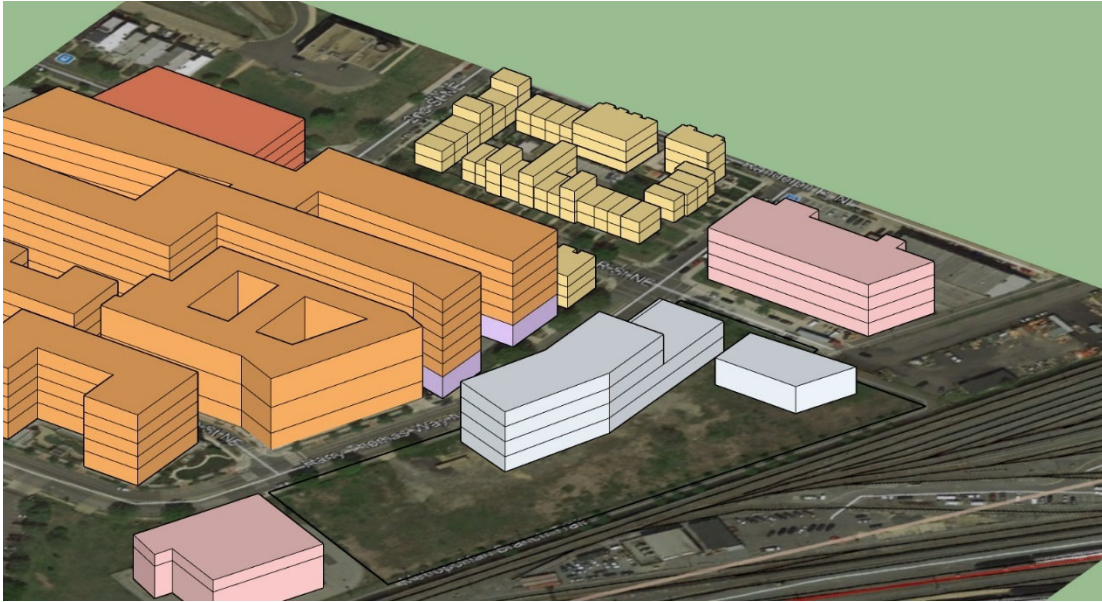


Figure 43, Scheme 1 3D. (Source: Author)

The second scheme, shown below, is an attempt at using the BIGyard precedent previously discussed. The two bar structures running East West fits in to the surrounding building forms. The primary wind directions in this area are East West. The courtyard becomes more exposed on either end and could begin to have a relationship the pedestrian street at Eckington Yards across the road.

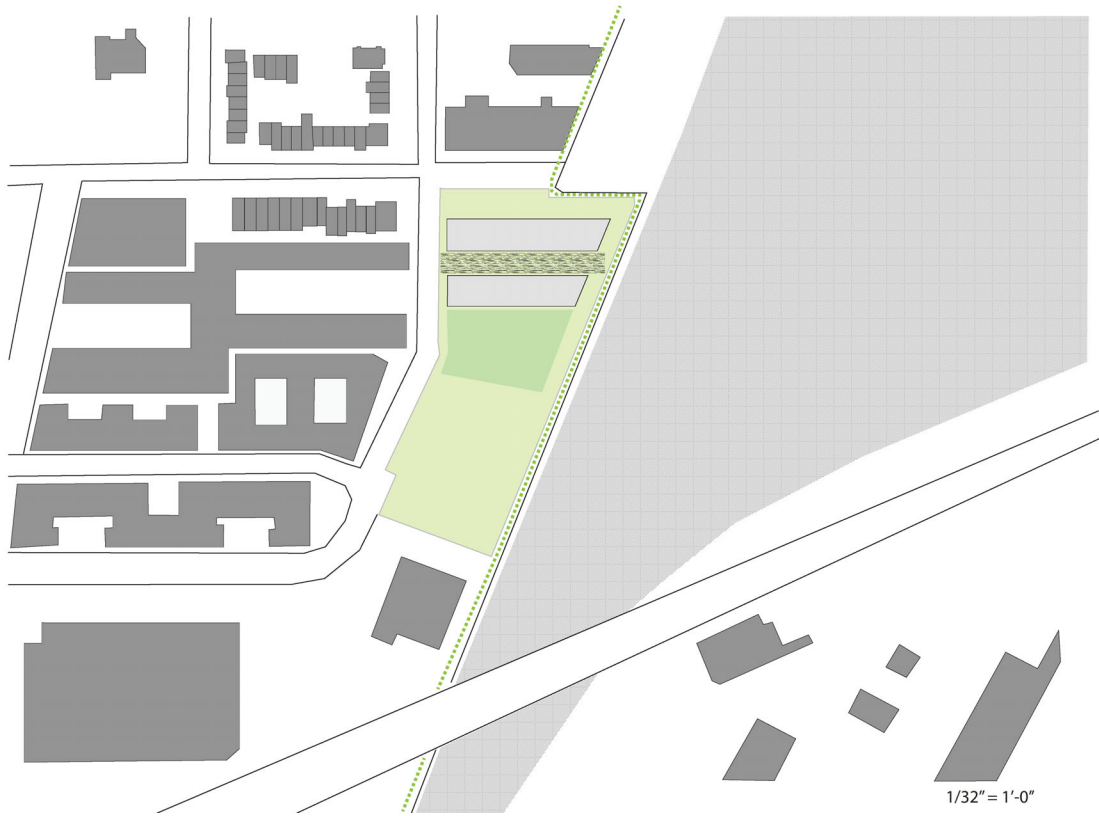


Figure 44, Scheme 2. (Source: Author)

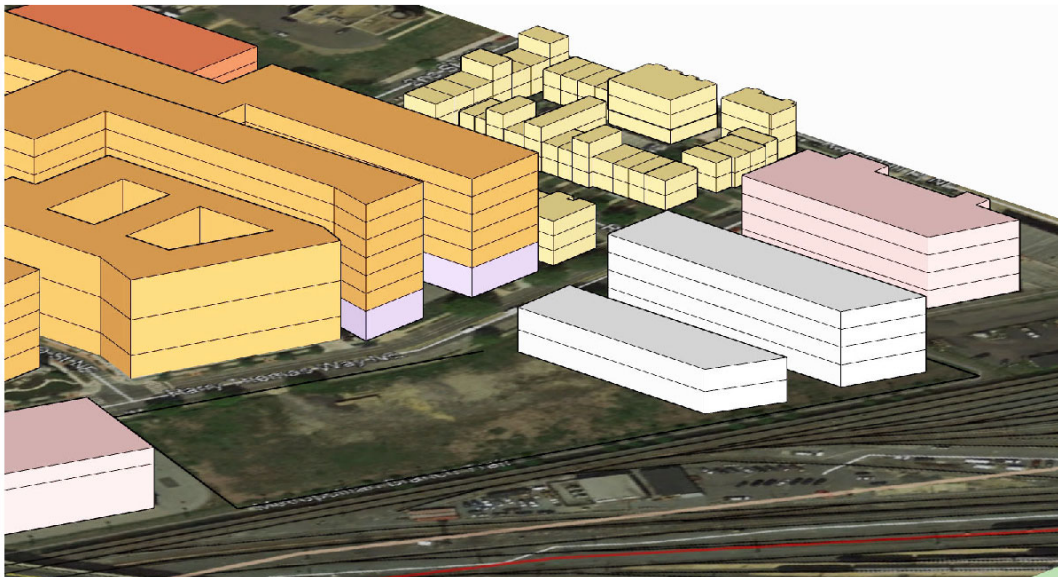


Figure 45, Scheme 2 3D. (Source: Author)

The last building scheme for this site is a typical courtyard building typology. The interior courtyard is completely enclosed and private to the public. It also slightly hugs the West side of the site in order to create a buffer between the building and the railyard. The courtyard might be raised to the second floor.

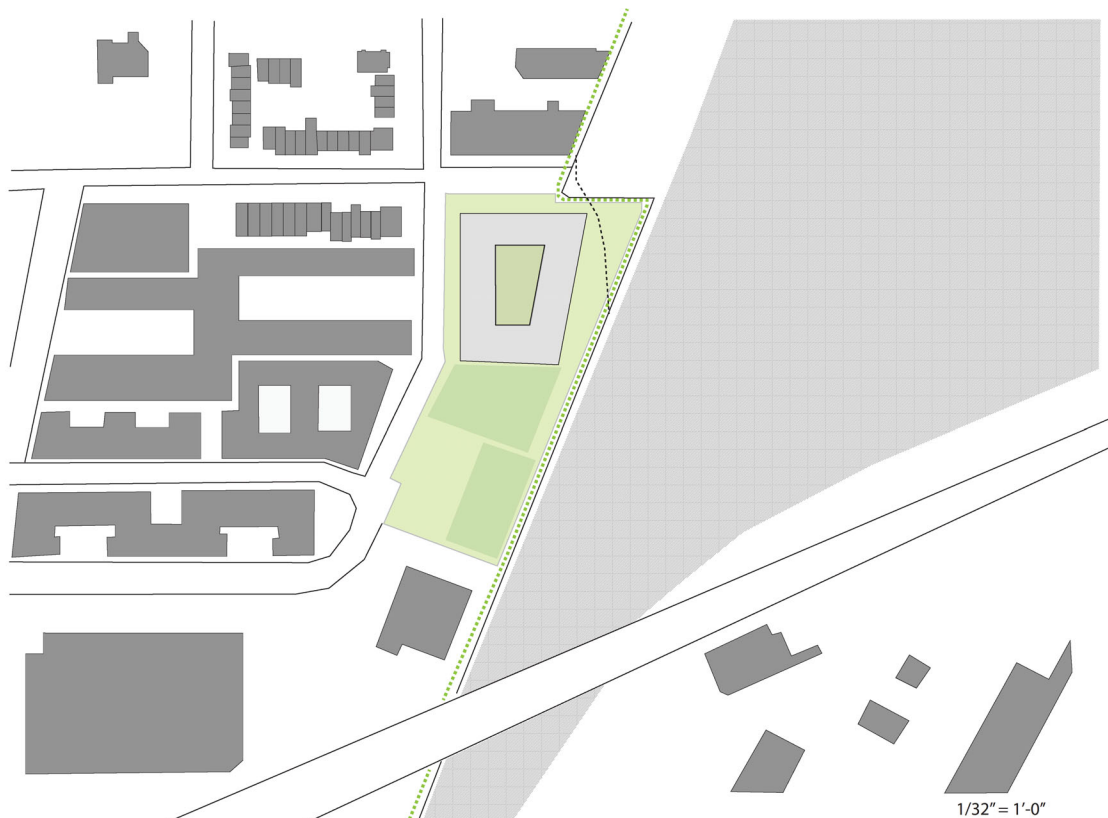


Figure 46, Scheme 3. (Source: Author)



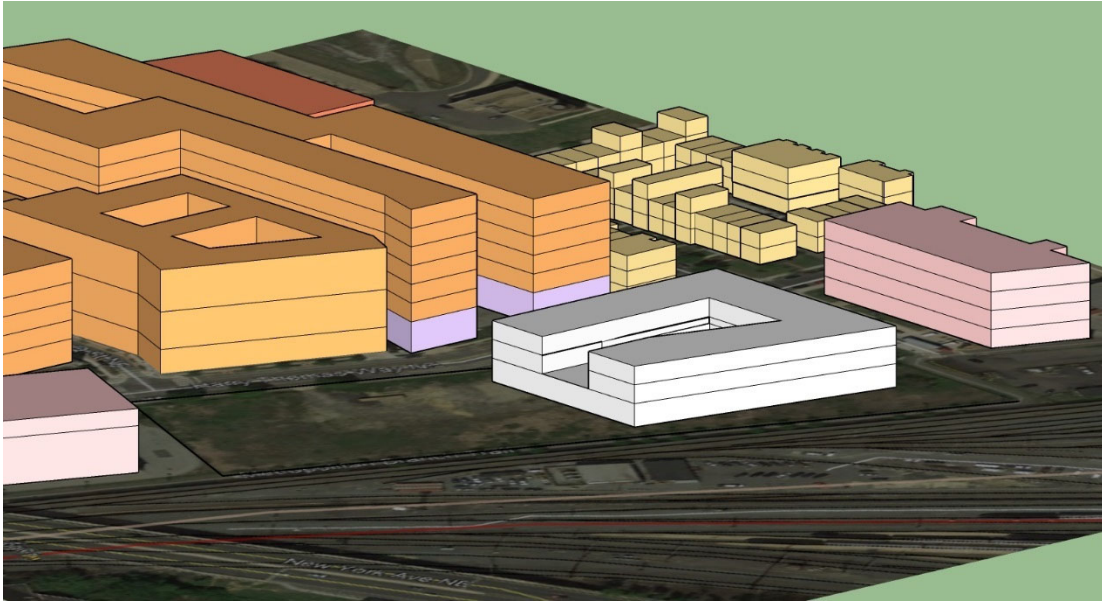


Figure 47, Scheme 3 3D. (Source: Author)

Based on the following site diagrams, St. Ann's Unity House was placed on the Northern part of the site with the scheme of two east-west bar buildings.

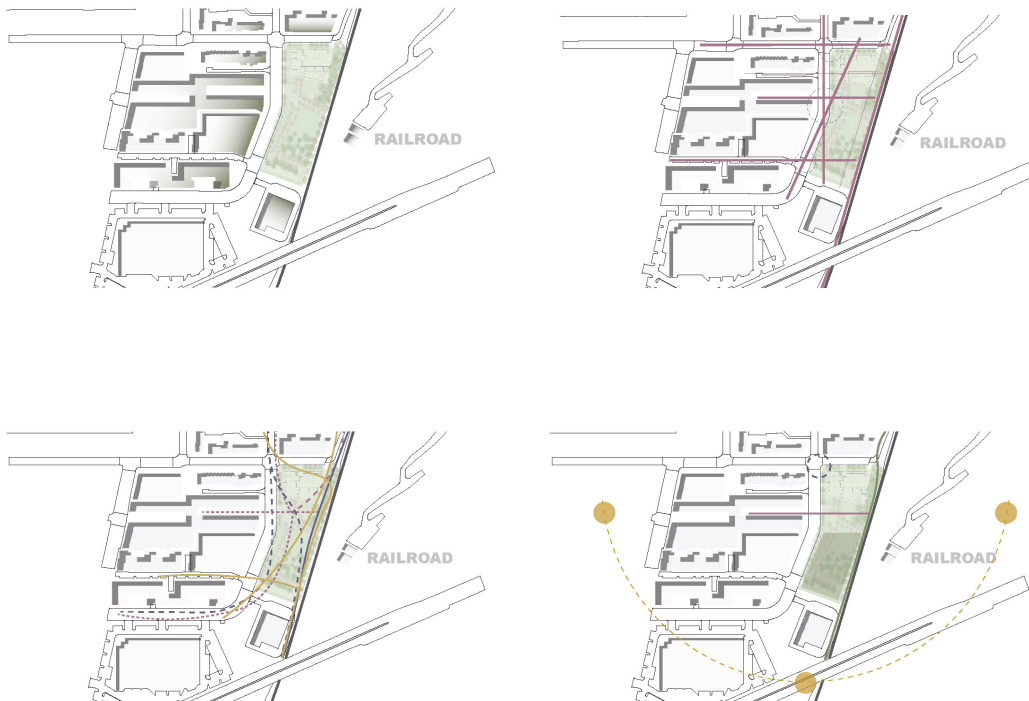


Figure 48, Site Analysis Diagram. (Source: Author)

## Chapter 8: Design Intent

### Building Massing

The massing of St. Ann's Unity House was created through the site analysis and design concepts that contribute to a healthy and supportive environment for mothers and their children. After placing the building on the Northern part of the site and deciding on the essential program elements, the massing began to take shape.



Figure 49, Massing Move 1. (Source: Author)

The first move, shown in figure 49, was to carve out a courtyard to create a main outdoor common space. Placing the courtyard on the second level allows for a buffer between the residents and the street. It offers protection and security for the women and children living at Unity House. Since these women are becoming more independent and are adjusting to society, the courtyard is a balance between public and private. It is more open than an interior courtyard where there are no views in or out, but the privacy aspect comes from being elevated on the second level.

The second design move was to push the southern bar lower. Having the two bars at different heights allows for more sunlight to enter the courtyard from the south. The northern bar is two floors higher than the southern bar. This move also



created opportunities for program placement. The two stories above the courtyard in the southern bar houses duplex units. The northern bar holds common spaces off of the courtyard as well as single story unit types on the third through fifth floors.

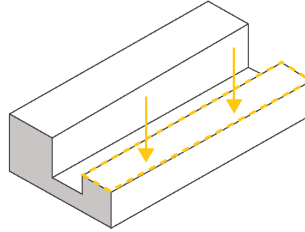


Figure 50, Massing Move 2. (Source: Author)

Next, cutouts and setbacks were incorporated in the northern bar in order for every unit to have immediate access to outdoor space. Figure 51 shows the locations of these balconies. Each one faces South in order to receive the most sunlight. A room was also added in the courtyard that acts as a connection between the two bars. The walls of this room continue down to the ground which creates a larger street presence and signifies the entrance location.

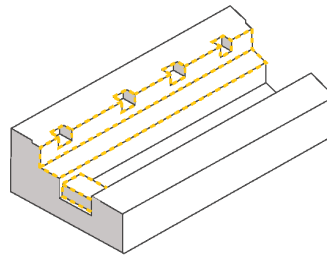


Figure 51, Massing Move 3. (Source: Author)

The southern bar was then angled away from the northern bar 10°. This angle mimics the site geometry as well as creates a larger courtyard area on the eastern-

most side. This extra room leaves space for the Chapel to be placed as an object in the courtyard.

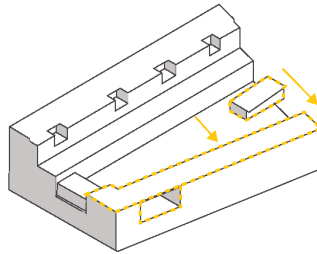


Figure 52, Massing Move 4. (Source: Author)

The final moves of the building massing were the façade undulations. A loggia was added to the podium level which leads back to the day care on the ground floor. The two-story units in the southern bar bump out to create a 90° room. These undulations are designated by material change which will be discussed in a later section.

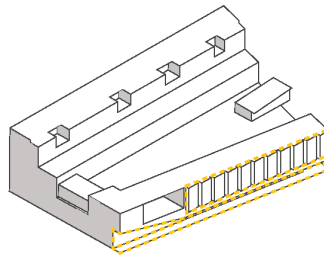


Figure 53, Massing Move 5. (Source: Author)

### Design Concepts

### Shared Space

Creating a supportive community is one of the main design drivers for this thesis. A community is important because these single mothers rely heavily on each other as they grow into successful mothers and women. They learn from each other and comfort each other since they have similar life experiences.

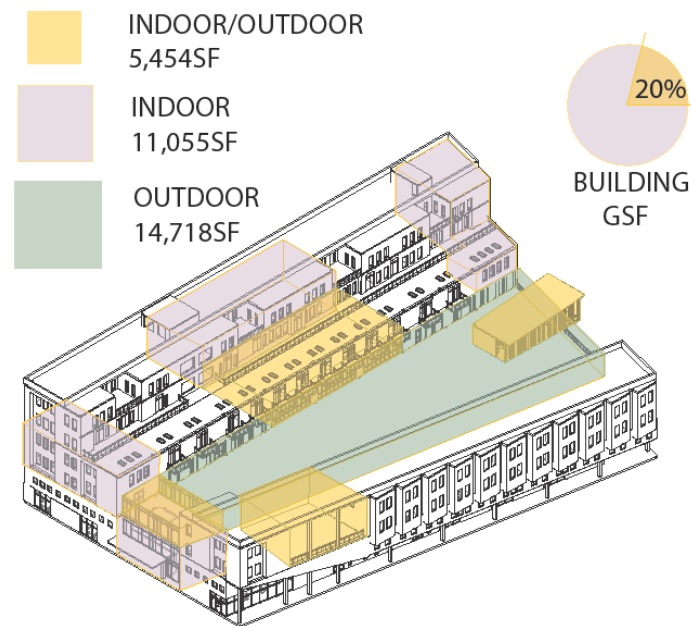


Figure 54, Shared Spaces. (Source: Author)

The above diagram shows the various common spaces in Unity House. The courtyard is the large outdoor common space that acts as the private outdoor area compared to the park which is the public outdoor area. The indoor common spaces are areas such as the lobby, visitor room, library, and the quieter common rooms on each residential floor. The indoor/outdoor common spaces are areas that are either covered outdoor rooms or rooms that can be opened up on a nice day. Since supportive environments are crucial for these mothers to heal and succeed, there

needed to be ample spaces where their time would overlap in order to build these relationships.

### Sunlight

As mentioned before, access to sunlight provides many health benefits, both physically and mentally. Many of these women and children are coming from unhealthy environments. Besides eating and exercising, sunlight can help manage metabolism, diabetes, nervous system and depression. These factors contributed to why sunlight has a significant presence in this thesis.

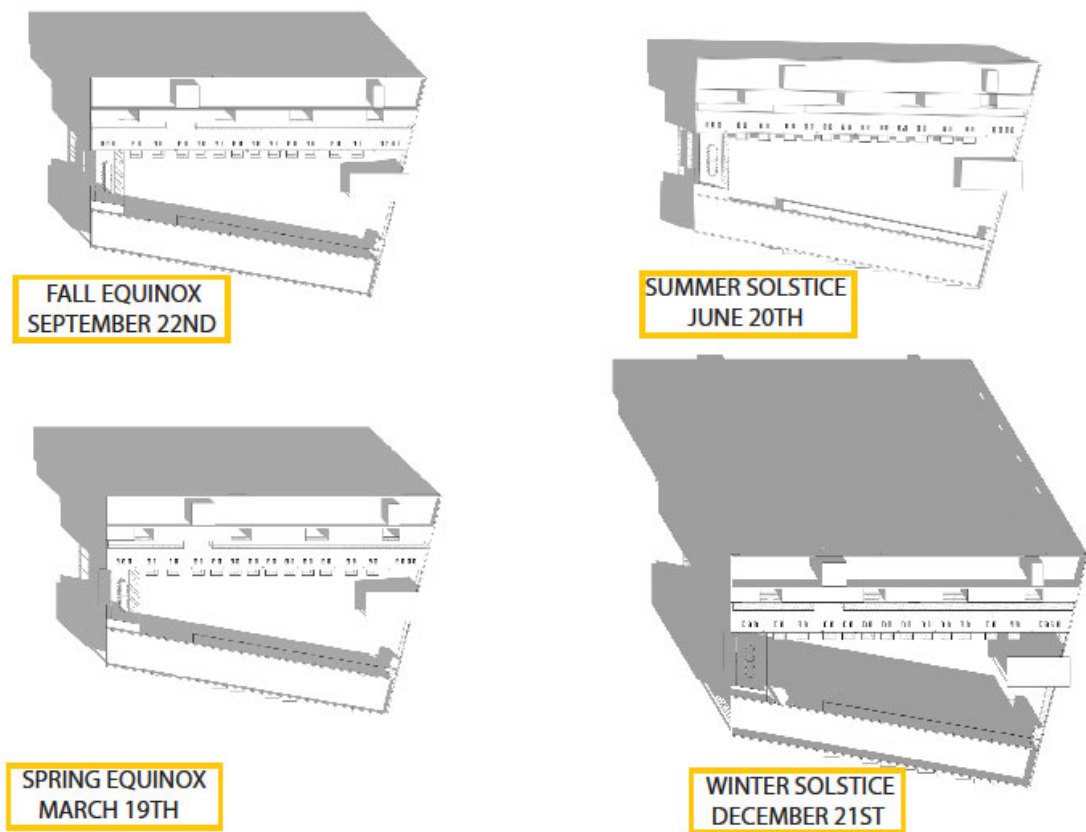


Figure 55, Shadow Analysis. (Source: Author)

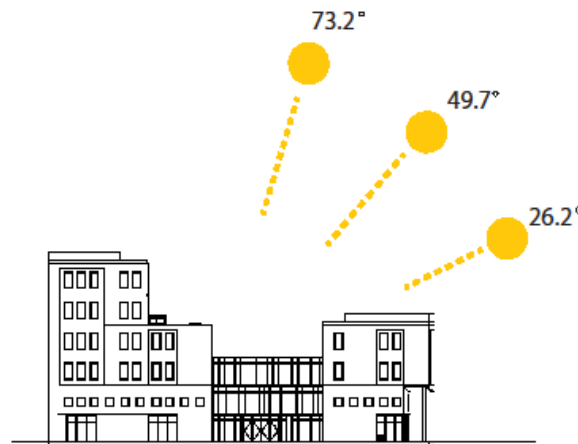


Figure 56, Sun Altitudes. (Source Author)

The shadow analysis in figure 55 demonstrates how sunlight enters the courtyard and hits the units of the northern bar on every day of the year, even when the sun is at its lowest altitude on December 21<sup>st</sup>. The fact that the southern portion of the site is designated as NoMa greenspace ensures that sunlight will continue to permeate Unity House for many years to come.

### Materials

The main materials for Unity House's design are concrete panels and wood cladding. The concrete came from looking into Washington D.C.'s architecture as well as monastic architecture. Both architectural styles can be heavy and imposing with the use of concrete or stone. Concrete also gives a sense of permanence and substance. These are important characteristics when representing St. Ann's Unity House. St. Ann's is an institution that has a deep history in D.C. Its architecture and materiality should represent these aspects. Wood cladding was incorporated in order

to soften the concrete and to balance the idea that Unity House is both an institution and a home.

The podium level of Unity House is built from concrete walls with a concrete panel system as the exterior finish. The upper levels are made of metal studs with either concrete panels or wood cladding as the exterior finish, depending on the bay. The wall section in Figure 58 shows where these materials are located.



Figure 57. Materials. (Source: Author)

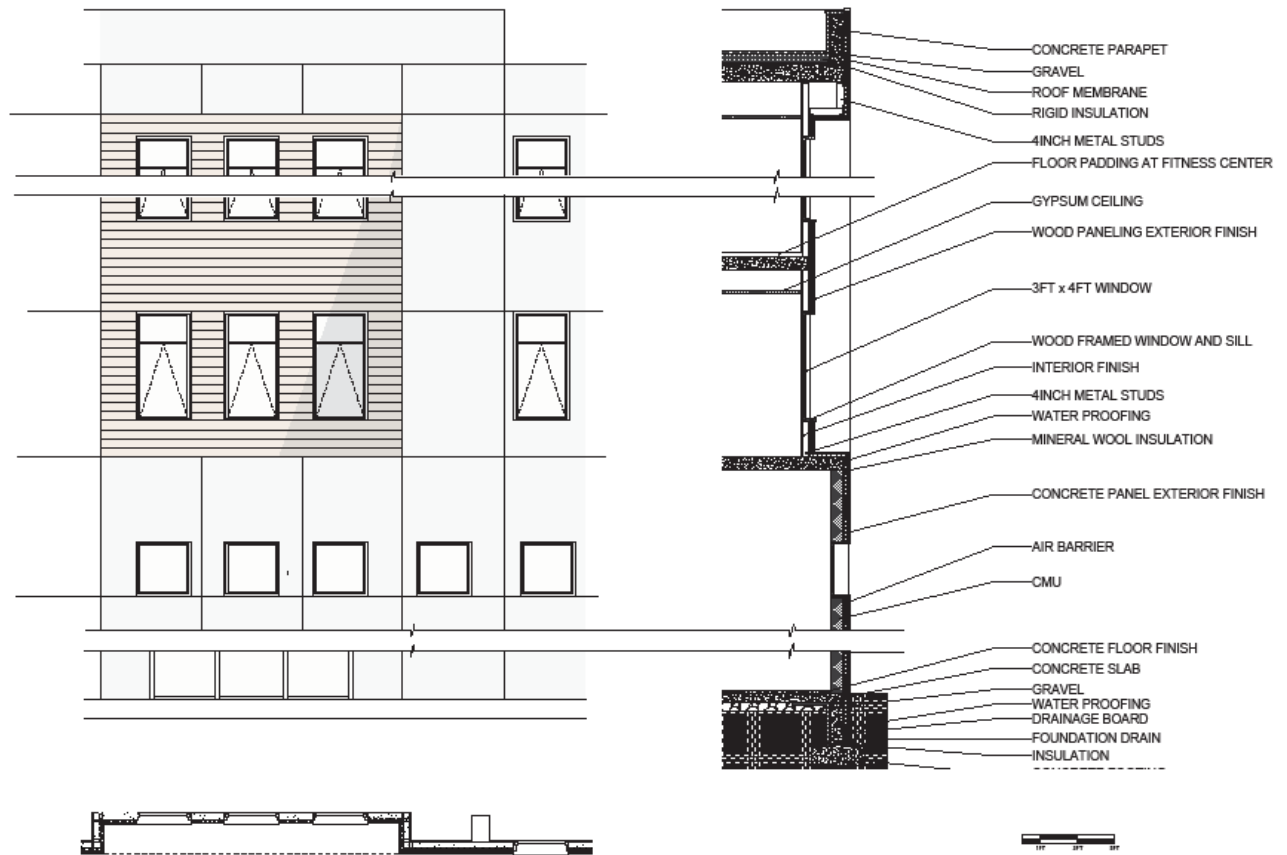


Figure 58, Wall Section and Façade Bay. (Source: Author)

### Building Layout





Figure 59, First Floor Plan. (Source: Author)

The first two levels of Unity House act as the podium level and hold programs that are more open to the public. The private areas begin on the second level. Some important spaces on the first floor include the daycare and the lobby. The mezzanine level shown in figure 60 holds the daycare loft, meeting space as well as the mechanical penthouse for the building. The daycare is a key feature in this thesis because it plays an integral role in helping these women gain their independence. The women have a safe and affordable place to leave their child while they go to work or school. This daycare facility is also available for families that live in the NoMa neighborhood that surrounds Unity House. Since affordable daycare is not prevalent in Washington D.C. Unity House is setting an example to help mitigate this societal issue.

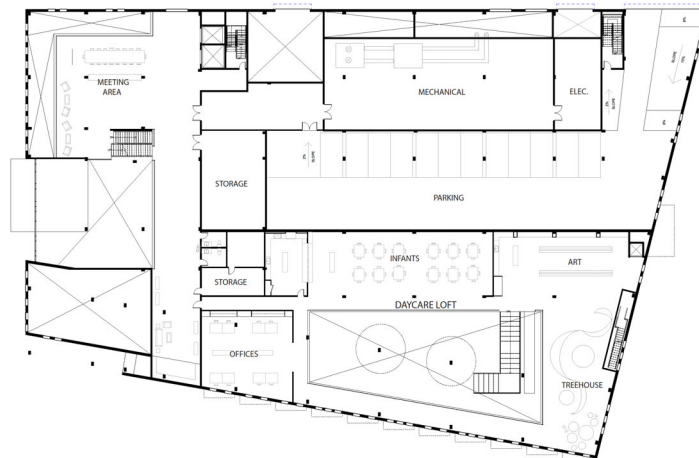


Figure 60, Mezzanine Floor Plan. (Source: Author)



Figure 61, Daycare View. (Source: Author)



Figure 62, Lobby View. (Source: Author)



Figure 63, Second Floor Plan. (Source: Author)

The second floor of Unity House is the courtyard level. The courtyard is the main outdoor common space that connects the two bar buildings. The western portion is the more active side used for circulation and hosting visitors. The middle section is the play area that extends into the great room of the north bar building. The eastern most side is for quiet reflection. The chapel is located here and it is adjacent to the therapy rooms. The second level also contains the library and the first level of the duplexes in the southern bar. This floor acts as the main level for the residents of Unity House.



Figure 64, East Courtyard View. (Source: Author)



Figure 65, Chapel View. (Source: Author)





Figure 66, Library View. (Source: Author)

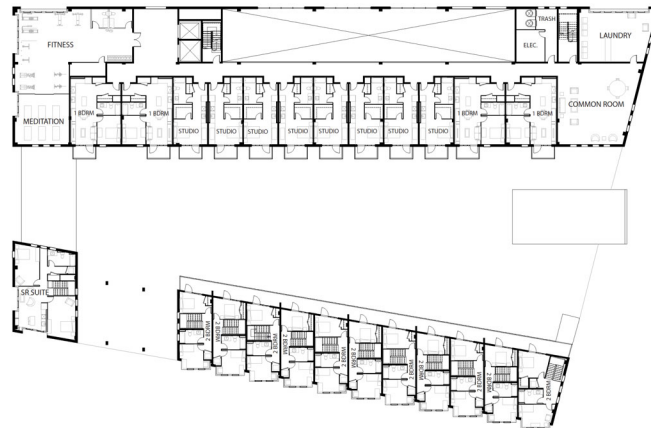


Figure 67. Third Floor Plan. (Source: Author)

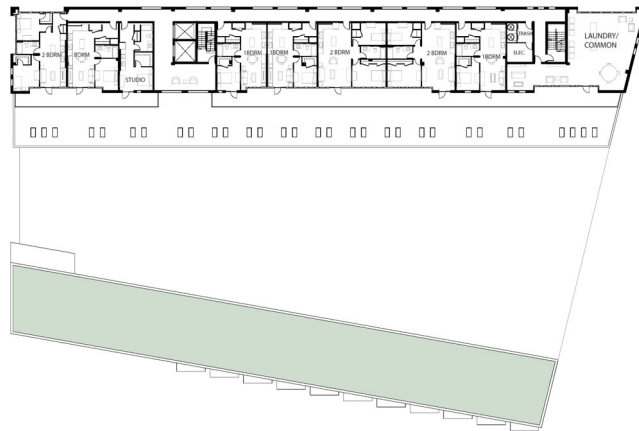


Figure 68, Fourth Floor Plan. (Source: Author)



Figure 69, Fifth Floor Plan. (Source: Author)

The third through fifth floors consist of residential units for single mothers and their children. The third floor of the South bar consists of the second level of the duplex units. The main unit type on the third floor of the North bar is a studio. The South bar stops after the third floor. The main unit type on the fourth floor is a one bedroom and the main unit type on the fifth floor is a two bedroom. Each residential floor has a common room with shared laundry. This allows for different scales of

community within Unity House. Mothers and children on the same floor may have closer relationships than with other with families on a different floor.

These floor plans demonstrate how the spaces become more private and secure as one moves up the building. The design and layout are a balance between immersing these families into society while also protecting them and creating a safe environment to live. These plans also highlight the various programs that Unity House offers in order to help these women gain more self-sufficiency. This thesis creates a healthy and supportive community for these mothers and children while they continue to prepare themselves for a successful and independent future.



Figure 70, Street View. (Source: Author)





Figure 71, Metropolitan Branch Trail View. (Source: Author)

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